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**HOME
SAFETY**



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Papers Delivered in the

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By WILLIAM V. WHITE
Former Executive Director, National Commission on Product Safety,
Washington, D.C.

9, none of us associated with the
ion staff have dared to do that for
could be comparable to sneezing at
or whistling in a dressing room.
us have somehow developed a hesi-
speculate on the future for fear of
casting a negative spell or a hex
in negotiations.

The Commission found that existing controls over product hazards in this country are patently inadequate. They have substantiated a need for a major Federal role in the development and execution of new and stronger methods to protect the American consumer.

In developing our recommendations, we were faced with certain critical questions, such as:

1. Should Federal authority be extended to new and different programs to reduce unreasonable product hazards? And if so, what form should such authority take?
2. In view of some of the frustrations and disappointments surrounding some Federal efforts in behalf of the consumer, what could be done to strengthen such efforts and bolster the position of the consumer in the sometimes intricate and cumbersome regulatory processes?
3. What role should mandatory safety standards play in reducing product hazards?

The Commission concluded with virtual unanimity that broad responsibility for the safety of the consumer should be vested in a new conspicuously independent Federal regulatory agency. They have, therefore, recommended to the President and the Congress the passage of a Consumer Product Safety Act. This Act would create a permanent Consumer Product Safety Commission which would consist of five Commissioners appointed by the President with the advice and consent of the United States Senate.

They have recommended an independent agency, concerned exclusively with the safety of consumer products, for good reason. We believe very strongly that if such an organization was subordinate to a larger agency administering other equally comprehensive or more glamorous programs, the emphasis on product safety would suffer. Protection of the public interest will be strengthened if the agency has authority to

Recommendation 1: "That the Commission be invested with authority to develop and set mandatory consumer product safety standards where industry's own efforts are not sufficient to protect consumers from unreasonable risks of death or injury."

Recommendation 2: "That, in addition to authority to promulgate consumer product safety standards, the Commission be empowered to seek a court order to enjoin the marketing of specific products of individual manufacturers which create an unreasonable risk to the safety of the public."

Recommendation 3: "That the new Commission be given the authority to employ a range of methods to secure compliance with its various safety measures and that it be provided with authority to use such sanctions as are necessary and appropriate to the type of violation and degree of hazard."

against personal liability or loss. Presently, no Federal law of broad scope provides for recall of dangerous household products or for an injunction of sales when circumstances warrant. The mere existence of such authority to impose such sanctions should make their use rare.

We have found that one of the most direct and economical techniques of developing information is to schedule hearings and call witnesses with expert knowledge or firsthand experience. Inspection of premises is also a reasonable method of securing compliance with responsible manufacturing practices that affect public safety.

We believe this to be an extremely imaginative and innovative recommendation. Consumers need a Federal official with sufficient powers and resources to act exclusively as spokesman and representative regarding unreasonably hazardous products. No private consumer organization has the technical and legal expertise and funds, or the time, to devote to this critical task. Quite as private enterprise requires counsel to represent its interests in dealings with agencies or government, the public requires an Advocate who will defend consumer safety against exploitation, excess, or neglect.

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the degree of hazard, and the proposed remedies."

ation relative to consumer product in be useful to manufacturers, and government alike. Such information indicate which hazards warrant actions and could help the Commission establish its priorities. Along similar lines, we recommended that the Consumer Safety Commission have authority over states and localities in product activities or projects in surveillance, reporting, hazard reduction, research, and testing.

ities and municipalities traditionally used to adapt national programs to local conditions, they have also been of original and innovative technical ideas in legislation and publication. They provide an indispensable and source for the feedback of information about product safety and the effect regulations.

medation 7: "That the Consumer Safety Commission, in cooperation with the Secretary of Commerce acting through the National Bureau of Standards, be authorized to accredit private laboratories qualified to test and certify consumer products with specific product safety standards; further recommend that the Commission be empowered to require independent testing of consumer products which present a hazard to life."

same token, we believe that the Consumer Product Safety Commission have a modest laboratory facility to safety research and to develop technical information for use by manufacturers and making groups.

other recommendations pertain to and function of agencies of the government. For example, the Commission recommended that the authority of the Federal Trade Commission be rigorously and, if necessary, expanded to apply certification program which misleads the consumer as to the meaning of a label.

recommended that existing programs of the Business Administration be expanded to authorize granting of long term, interest-free loans to assist small businesses in meeting requirements of product safety regulations. This would involve amending the

Small Business Act to expand the existing concept of "product disaster" loans to make available such loans when small businesses faced competitive disadvantage caused by engineering, testing, retooling, or related expenditures necessitated by safety improvements.

Similarly, it recommended that the Federal government, through its purchasing and insurance agents, utilize its influence on the American marketplace by looking to establish safety standards and, wherever practicable, new safety designs in selecting products for Federal use. Federal agencies should also provide both manufacturers as well as consumers with acquired information about hazards in consumer products.

The Federal government possesses an enormous amount of technical expertise, applicable to product safety considerations. We believe that technical experts from any Federal agency should be authorized to participate in voluntary standards-setting activities—excluding cases where there would be a real or potential conflict of interest, of course. This additional involvement of Federal personnel could serve to give the consumer a more effective voice in private safety programs.

Several Commission recommendations concern the legal rights of injured consumers. For example, the Commission recommended that injured consumers be permitted to file claims for treble damages, as well as class action suits, in the district courts of the United States against manufacturers who knowingly or willfully violate Federal consumer product safety standards. A similar recommendation is that the doctrine of strict tort liability be applied uniformly in state and Federal courts and that state legislatures modify obsolete statutory provisions which unduly impinge on the consumer's right of redress for injury.

And speaking of the states, the Commission recommended that a mandatory Federal safety standard for a consumer product preempt any state or local standard with appropriate provision for exemption where clear and compelling conditions in the state may make it necessary.

Lastly, in the way of recommendations, the Commission has addressed itself to the international scene. We believe that products imported for sale in the United States should

be denied entry if they violate Federal consumer product safety standards or regulations, or are deemed to be unreasonably hazardous. We believe that the government of the United States should strive to close the gap in legislative authority which now exists between this nation and other industrial countries of the world. We further recommend that this nation lend support to international standards development and that it prohibit the export of hazardous products to other countries.

Each of these recommendations by the National Commission on Product Safety could be discussed separately and at considerable length. I've reviewed them in a "nutshell" fashion for you in the interest of time. However, it doesn't take an undue amount of imagination to see that a fruition of these recommendations could have vast implications for the work of safety specialists everywhere.

First—and foremost—the safety specialist would have a strong, and effective agency of the Federal government to turn to for assistance. From grants-in-aid for local programs and projects to the latest in up to date authoritative injury data; from relevant technical information concerning product standards to films and pamphlets for local distribution.

A safety worker could refer case information and consumer complaints to such an agency with assurance that careful review and consideration would always be given by

knowledgeable safety experts. To some extent, consumer products suspected of being hazardous could be submitted to the laboratory facility for examination and testing.

I would hope that if such a Consumer Product Safety Commission became reality there would develop a strong and effective interrelationship with safety experts throughout the United States, involving a constant exchange of information, ideas, suggestions, and solutions.

Those of us who helped to formulate these recommendations believe that this type of highly intensive effort is a pre-requisite for adequately coping with the present day problem of consumer product related injury and death. We believe that a strong and independent Federal role in product safety is absolutely necessary for assuring the American consumer his basic right to safety.

However, the future remains somewhat unclear. The recommended legislation has been introduced in both the House of Representatives and the Senate, where it will be competing with dozens of other proposed measures which address themselves to the Federal government's role in product safety.

Those of you who support the work of the Commission and who agree with its findings might share your views with us; we'll probably respond by complimenting you on your great wisdom . . . and politely suggest that you might want to share your thoughts with your Congressman too!

ORGANIZATION AND SYSTEMS FOR PRODUCT SAFETY

By M. F. BIANCARDI
Dir., Product Safety, Employers Insurance of Wausau, Wausau, Wis.

There is tremendous opportunity, as well as need for the safety specialist in the design, manufacture, and marketing of commercial and industrial goods, as well as consumer items. The broad concepts and the specifics that we will review are applicable to all kinds of products.

I have been associated with product safety endeavors for about ten years on a part-

time or fulltime basis. During this time some basic approaches and systems related to this evolving specialty have been identified. During the past two to three years, systems that apply have been defined and refined. Diagrams, charts, and outlines have been produced that can be shared.

Product safety is an extremely complex product characteristic. Unless each of us

ach organization manufacturing a poorly hazardous product recognizes this, it misses our mark of achieving optimum—that degree of safety which may come from item to item but blends harmoniously with the other product and life objectives public may be seeking.

stantially, there are two parts to the product safety system—an internal and an external component. These are brought together by the product itself, which of both. The relationships within an organization that designs, produces, and sells a product we have likened to the chain of command, to show that internal functions must link together to produce a product that satisfies the customer's safety needs and desires. Key positions in this endless chain are to the marketing organization.

zoom in on a typical manufacturing plant or plant and see how the responsibility for product safety spread themselves among the many functions of marketing, engineering, manufacturing, legal, and accounting services. In your company the safety director. Here, just as in manufacturing, there is a responsibility to management in organizing activities and safety objectives, assisting in their execution and evaluating their effectiveness.

how does the safety director perform road functions? What specific duties he have? Broadly, his functions should be to help engineering, design, and manufacturing management in safety knowledge, skills, and technical product design, manufacturing, so as to reduce product accidents, customer acceptance, and minimize productivity and losses.

specific responsibilities and duties he to:

develop product safety responsibilities in operating and staff positions in integrating them into existing descriptions.

wise means to assist operating management in communicating product safety liabilities to their personnel.

wise and recommend training and control activities to improve the safety control skills of line personnel.

4. Provide a source of readily available accident and safety data and references for use by operating people.

5. Provide safety consultation on product design, manufacture, and application.

6. Aid product accident investigation, accident analysis, and defense against unwarranted claims.

7. Recommend systems that will aid functional and operating departments to meet their responsibilities for safety.

8. Develop communications and feedback systems to aid product safety and loss control.

9. Maintain liaison with business, professional, and governmental organizations on standards, regulations, and other matters pertinent to product safety.

10. Represent the company on committees dealing with safety matters bearing on company products, or assist other company people in such committee activities.

So much for what the product safety specialist might be doing. How does he do them? Time will not permit a discussion of all the techniques and processes that might be applied by the product safety specialist, but let's take a look at two of his functions and responsibilities: (1) providing consultation in product design, and (2) developing systems that will aid functional and operating departments. At this time we'll focus on a fairly simple, straightforward analysis system that can be used by the safety specialist as well as the design engineer to make product hazard analyses.

The loss producing factors that have to be evaluated are product hazards, product failure and malfunction, advertising and warranty, operating instructions, and internal controls. We believe all hazard and loss exposures arise out of or are controlled by these factors. For a loss potential evaluating system we suggest each factor be evaluated separately and then a composite summary be made.

Through checklists which have been developed, this system permits a step-by-step identification of hazard sources (or energy modes), hazards, and specific product component involved. It guides one into consideration of man, environment and time factors, application of controls, and conformity with codes and standards so that potential consequences in injury property damage and down

time can be determined. From these conclusions an evaluation of potential injury and damage (how frequent, how severe) can be made.

We are heartened by the receptivity that manufacturers are showing to these some-

what definitive approaches for organizing and implementing product safety activities. We hope you find them not only interesting but useful, and that you will have the opportunity to apply these systems or some of your own making to your own products.

ASSISTANCE FROM TESTING ORGANIZATIONS TO INSURE PRODUCT RELIABILITY

By DEREK BARTON
Vice Pres. and Sec., Underwriters' Laboratories, Inc., Chicago, Illinois

In this paper we will show how testing organizations can assist to insure product reliability. Two words in the subject bother me. Take the word "insure." I hope that no one will go away with the impression that UL or any other testing laboratory is in a position to "insure" that a product is reliable or that it is absolutely safe. I would prefer to leave such a role to the insurance companies. The word "reliability" seems to suggest a scope of operations much broader than that undertaken by UL. Our involvement with a product is pretty much limited to the aspects of safety to life and property. Reliability is a factor for consideration only insofar as it affects safety. The basic objective of an independent testing laboratory in the context of the broad subject being explored here is to assist in getting safe equipment into the hands of the consumer.

The full service independent testing laboratory such as Underwriters' Laboratories has three basic capabilities which it utilizes to achieve the broad objective. These are (1) standards development, (2) engineering investigations to determine compliance of products with those standards, and (3) a listing and factory follow-up service to provide for the identification and periodic audit of products found acceptable under the engineering investigation.

First, let us consider standards. Product safety commences with product safety standards. UL has played a significant and leading role in the development of product safety standards throughout its 76 years, and it is proud of that role. I do not mean to suggest that UL has done the job by itself. Standards development by its very nature must be

a cooperative effort. Good standards consist of a proper mix of good engineering, common sense, and benefit of field experience. Assistance is obtained from a number of sources representing industry, government, and the consumer or user. Representatives of product manufacturers work with the Laboratories' engineers through the mechanism of Industry Advisory Conferences. Feedback on field experience is obtained from engineers associated with governmental enforcement authorities and insurance interests serving on the various engineering councils of the Laboratories. Various individual consumers and representatives of consumer organizations provide review and input through the vehicle of UL's Consumer Advisory Council. For certain product categories, we have organized commercial-industrial users groups to secure the benefit of experience gained regarding the performance of listed products in the field. All comments and suggestions are given serious consideration. However, in the final analysis, UL standards represent the judgment of UL engineers as to the features and performance necessary to achieve a reasonable level of safety.

Consumer product standards must, to be effective, take into consideration the use and maintenance practices of the user. This is a difficult problem, because there is an apparent information gap relating to the proper use of personal consumer products. In the occupational safety area, codes and practices have been developed and used successfully by industry and government to safeguard workers on the job. But with respect to the use of consumer products off the job, there

codes or practices toward which standards may be oriented. Regarding difficulty of communicating proper use, it is not practical to develop product standards which require the user to be completely informed and to be completely responsible. A realistic safety product standard recognizes the limited ability of the user to be completely informed and to be completely responsible. The basis of establishing safety standards is the basis of establishing safety standards. Misuse can be minimized by design, but hazards of misuse are completely eliminated except by the product, in most cases.

certain classes of products inherent use hazards which cannot be designed without destroying the product. In many cases, hazards are sufficiently well recognized that the user can be expected to protect himself from the hazard. In other cases, hazards are latent or hidden and require investigation. The approach taken by UL is to reduce inherent hazards as much as practicable and then remaining gap of safety by in- and warning the consumer of the hazard cannot be completely safe-

consumer products change with technology, materials, and production enterprise system is predicted the maximum utilization of technology to produce better performance at or less cost to the consumer. A manufacturer who spends considerable time and resources to develop a product which he hopes will give him a competitive advantage is not willing to let his product from the marketplace if his competitors catch up. It is therefore, that standards be capable within a suitable time frame to recognize incentive and innovation. UL is developing its standards by means of a safety concept. This permits the manufacturer to develop product features not contemplated at the time the standard was written. A tremendous reservoir of engineering and years of experience permits UL to develop new and novel products for prior standards have been published, is able to establish applicable requirements necessary to provide

adequate safeguards regardless of whether or not the requirements appear in a published standard.

Having adequate standards would be of little value if the manufacturer was not encouraged to produce the product in accordance with the requirements. Under this country's system of free enterprise, the manufacturer has, within certain limitations, the freedom and responsibility of determining the nature of the product that he will place on the market. Industry grows and prospers solely on the basis of satisfying the needs and desires of consumers. Generally, consumers are unable to make valid judgments regarding product safety because the features which make a product safe or unsafe are frequently not detectable by persons not informed in such matters. Recognizing this fact, authority for protecting the unwary consumer has frequently been established at various levels of government by the granting of broad police powers. For example, where the National Electrical Code has been adopted as law, the local authority having jurisdiction is responsible for deciding upon the approval of equipment and materials. In a number of localities, consumer protection is provided by "sales control laws." The persons responsible for enforcing the various laws are generally not able to determine on their own whether or not the product is reasonably free of hazards. The duly constituted authority, as a practical matter, relies on experts in making that determination. The "experts" generally take the form of independent testing laboratories.

This brings me to the second main function of the testing laboratory. Many manufacturers contract with independent testing laboratories for the engineering evaluation of their products with respect to a nationally recognized product safety standard. In the case of UL, its work, with few exceptions, is limited to determining compliance with its own standards. However, UL is prepared, when in the public interest, to conduct investigations with respect to other nationally recognized standards.

An essential part of the engineering investigation is the proper selection of representative samples. UL provides the manufacturer with two options. Generally, representative production samples are selected so that the results of the investigation may

be conclusive. But a method frequently used is for the manufacturer to submit prototype samples with the understanding that they will be compared with production samples after acceptable laboratory results are obtained. This provides the manufacturer with a high degree of assurance that his product will comply before he moves into final production.

After it is determined that the manufacturer's production complies with the applicable safety requirements, UL establishes the third and what we consider to be a very essential ingredient of the product safety system. We call it the Listing and Follow-Up Service. Most any manufacturer is able by concerted and determined effort to produce samples of a product that will comply with the safety requirements. But the real test is whether or not the manufacturer is able or willing to consistently produce the product in accordance with the standard.

Under UL's Follow-Up Service, the manufacturer is authorized to apply the Laboratories' registered Certification Mark to his production that complies with the Laboratories' requirements. He agrees not to apply the Mark to products which do not comply. UL inspectors make periodic inspections at the factory and frequently select samples for counter-check at one of UL's main testing stations to determine compliance with the requirements. Should examination or tests disclose features not in compliance with the requirements, the manufacturer is required either to correct the product or remove the Mark from the product. UL provides an essential function in auditing and supplementing the manufacturer's own assurance program, but the Laboratories' service is not designed nor intended to, and from a practical point of view could not, relieve the manufacturer of primary responsibility for his product.

For the consumer to derive benefits from this system, it is necessary that he or the responsible authority looking out for his welfare be able to identify products produced under the Service. This need has resulted in UL revising its system of Listing and Marks applied to products. Most types of household products may now be identified as complying with UL's requirement by the appearance of the symbol UL on the product. Some products bear a label bearing the Mark "Undertwriters' Laboratories, Inc.

listed" together with the name of the product. Under our revised system of marking, the appearance of these Listing Marks on the product is the only method authorized to identify products produced under the Listing and Follow-Up Service.

To better acquaint the consumer with the Listing Mark and its meaning we have developed a small fact sheet. Several million copies have been distributed to consumers through various channels. It says, "You have seen it a million times, but have you thought about what the UL symbol of safety means to you?" Then it goes on to explain in simple terms the significance of UL's Listing Marks. The brochure is available in reasonable quantities. Arrangements may be made to obtain large volumes at cost.

While research may not be considered to be a normal function of a testing organization, Undertwriters' Laboratories does have a number of persons conducting basic research on a full time basis. In addition to this formal research effort, on-going research is conducted by our project engineers as a part of their evaluation of new products. In an effort to improve the level of safety of household appliances, UL has increased its activities in the areas of hazard research and standards review. Greater emphasis is being devoted to the study of mechanical and thermal hazards. Additional work is being done to determine the effects of electric leakage current on human subjects. More specifically, an effort is being made to determine what level will cause a reaction by the subject leading to a potential side hazard, such as the spilling of hot liquids or the dropping of objects. A study is being made on the use of ground-fault circuit-interrupters in the home involving installations in approximately 100 different locations throughout the United States. The purpose of the investigation is to determine the effectiveness of ground-fault circuit-interrupters in preventing injury from electrical shocks, the possibility of making installations in homes, and the determination of the frequency and consequences of false tripping of the devices.

You are all aware that the standard way to remove a plug from a wall receptacle is to "grab hold of the cord and jerk." UL is in the process of determining the characteristics of the force impulses resulting from such action with the objective of

developing a standard test procedure for testing the adequacy of the connections between the cord and plug terminals.

the area of mechanical hazard evaluation a project of widespread interest in the determination of acceptable limits sharp edges and points on surfaces of articles.

comprising electrical, thermal, and mechanical hazard areas is a project, almost neglected, concerned with finger profiles. They may relate to accessibility of electrically live parts, thermally hot parts, or mechanically hazardous parts through openings in enclosures of appliances. In this investigation we are using 300 human subjects consisting of 100 male adults, 100 female adults, and 100 children. The objective is to prepare specifications for accessibility probes that can be applied to various types of appliances.

have rectified only a few of the current rich activities to emphasize the capability and importance that UL attaches to rich and the contribution that it makes to the product safety standards setting.

takes a rather large and diverse organization to provide the services outlined. UL has approximately 2,000 employees organized into six engineering departments and a Follow-Up Service Department. The engineering departments are located at four testing stations. Follow-Up inspectors are located in approximately 200 inspection centers in the USA and 28 foreign countries.

more than 15,000 companies subscribe to services of Underwriters' Laboratories.

Approximately 27,000 engineering jobs covering new or revised products are completed each year. More than one billion labels bearing the Laboratories Listing Mark are issued annually. Over 200,000 factory inspections are conducted each year.

We feel that Underwriters' Laboratories is performing a significant contribution to a voluntary system of product safety. I hope that I have been able to convey a feeling of the wide ranging capabilities of UL in the areas of standards development, product evaluation, and factory follow-up service to assist in getting safe equipment into the hands of the consumers.

The professional industrial safety expert can perform a significant role by assisting in the vast educational effort that is needed to help individual consumers properly use and maintain today's array of highly complicated and specialized appliances. Many millions of persons working in industry have been taught the value of safe working practices, safe working conditions, and safe equipment. These people have been made safety conscious in their places of employment by the direct promotion efforts of industry and labor working through safety experts.

It would seem natural to utilize this same know-how in bringing to this large and important segment of our population the same awareness and concern for safety in the home environment. I strongly suspect that this is really the point of the off-the-job safety program. The information that you need is available from various sources such as product manufacturers, trade associations, insurance companies, and safety oriented testing organizations such as UL.

PRODUCT SAFETY LEGISLATION: A FORECAST FOR THE 70'S

By LOYAL T. R. SNYDER

Staff Counsel, Senate Commerce Committee, Washington, D. C.

1970's will see increasing federal active activity in the product safety area. As one of the staff of the Senate Commerce Committee I have developed some views as to where this activity is likely to be. My views are necessarily my own and

do not represent the views of other staff members nor the members of the Committee. We can look to the recent past to gain some useful insights about the future federal activity in the area of product safety. Congress has been concerned about the need

for national approaches to product safety for many years, but the modern era dates from President Kennedy's Consumer Message to the Congress in 1962. There the President stated the basic consumer rights, and the first and paramount of these was "the right to be protected against the marketing of goods which are hazardous to health and life."

The 1960's were a period of new Congressional efforts to come to grips with the complexities of insuring consumer safety within the framework of our free enterprise system. The legislative effort of this period will provide a foundation for our examination of the likely accomplishments of the 1970's.

The legislative efforts of the 60's were piecemeal. The Congress passed acts to deal with the risks of unsafe motor vehicles, flammable fabrics, radiation from electronic devices, and the failure of gas pipelines. Even though this legislation dealt with specific subject areas, there were continual refinements which will influence the course of future legislation.

The most important legislation, however, embodied the realization that the complex world in which we live has greatly increased the hazards of living, and that the Congress would not be able to do an adequate job by passing piecemeal legislation. To meet the challenge of this realization the Congress created the National Commission on Product Safety. The work of this body is now complete and it clearly points toward the enactment of a comprehensive legislative program for consumer safety.

Although the National Commission on Product Safety was officially terminated when it submitted its final report on June 30, 1970, its legacy was the first really comprehensive view of the risks present in the modern marketplace. The interim report and several special reports as well as the final report are essential documents in any serious library of consumer safety literature. These publications are available through the Superintendent of Documents.

The legislative proposals of the Commission synthesize the principal ingredients of future federal legislation for consumer safety. The proposals are contained in the final report and in S. 4054, introduced to

place the recommendations before the Congress. There are several broad generalizations which can be made about future consumer safety legislation and I will attempt to trace these factors in the context of the recommendations of the Commission.

1. Future safety standards will be mandatory. Clearly, we cannot leave compliance with safety standards to the individual firms in the marketplace to comply with or not as they please. Product safety may not cost much but there are sure to be some start-up costs. If firms will be placed at a competitive disadvantage by providing the consumer with safety features in a voluntary program the whole purpose of the product safety program will be defeated by market forces. Those in an industry who desire to be responsive to the consumers' need for safety point to the 1936 experience of the Ford Motor Company to illustrate what can happen when a producer incorporates safety features which cause his price to be slightly above the prevailing market price. While there is room for doubt about the actual financial impact of increased safety engineering, producers are so wary of this factor that it is unlikely that we will see any effort to leave consumer safety to voluntary standards.

Nor are voluntary, industry-wide efforts likely to be effective. The experiences of the past 30 years indicate that industry-wide cooperation in standard setting frequently results in the adoption of standards weak enough to permit all existing products to comply with them and may at the same time provide an opportunity for the consumption of anti-competitive practices which are unrelated to product safety.

Nor are future standards likely to be embodied in Congressional legislation. Proper consideration of all the elements involved with setting specific standards is so technical and time consuming that Congress will surely continue to delegate this task to specialized bodies. However, we will see a continuation of Congressional attempts to prevent the administration of programs from bogging down over the general intent of the legislation. One example of this may be the precise manner in which the Congress defined "toxic" in the Hazardous Substances Act.

Commission proposed that the specific be established by an independent proposed federal agency would interested parties in its processes. legislation would ensure a open process where all interested including consumer representatives, given an opportunity to be heard. basis of any legislation will be upon and the right to be heard.

standard products will be subject and repurchase. Future legislation to continue to provide that goods to meet standards will be subject e and it will probably follow the Child Protection and Toy Safety 1969. That act provides that goods to meet standards must be repurchase from retailers and consumers. Such on places the economic responsibility manufacturers and also makes the consider the risk of dealing with 3rd producers, since the retailer's repurchase from the consumer is it of the producer's similar duty to se from the retailer.

market certification will be re- whenever specific standards exist, the enforcement problems revealed nt safety legislation is the difficulty g to establish that each item pro- y a given manufacturer fails the . The present legislation places the at of violation at the place of sale ment of defective goods. Since the n does not require a manufacturer ct a quality control and testing pro- is not enough for a safety inspector ods being produced which could not e sold or shipped in commerce.

Congress has adopted the proposals Commission which would move the compliance back from the market, the point of manufacture. The Fabrics Act amendments of 1970 that all goods subject to the stand- t be manufactured under a continu- ing program approved by the ment of Commerce. All goods must id by the manufacturer as having ted and passed the standard. This jilify the enforcement process and en- greater margin of safety for the r.

4. Governmental sanctions for failure to conform to established standards will be increased. Moved by the outraged cries of consumers who have come to realize that some unprincipled manufacturers feel that it is cheaper to pay the modest penalties under current legislation rather than conform to the regulations, the Commission proposes increased penalties for the violation of safety standards. In addition to the economic pain of having to repurchase unsafe goods, manufacturers would be subject to criminal fines for negligent violation of the standard and substantially increased penalties for willful violations. In addition, the Commission proposed that the enforcement agency should be entitled to assess a substantial civil penalty.

The Senate embodied these recommendations into the Flammable Fabrics amendments of 1970 (S. 3765). The criminal penalty for willful violations was raised to \$10,000 per violation, and a new criminal penalty for negligent violation of \$1,000 per violation was added.

5. Federal safety legislation will not pre-empt state programs which provide for additional safety features and which do not frustrate compliance with the federal standards. Although federal legislation can pre-empt state safety standards the proposals of the Commission urge that Congress expressly provide for the continued application of state safety standards which do not conflict with federal standards. So long as the state standards do not frustrate compliance with federal standards Congress should not let the sometimes delayed reactions of the federal government prevent the states from taking steps which will enhance public safety.

More importantly, product safety standards should not abrogate the common law duties of a seller with respect to his buyer. Safety standards set by legislative and regulatory bodies have often lagged behind the developments of the courts in protecting purchasers. None of the justifications yet presented would convince me that Congress should impede future developments in the area of product liability law when it deals with the establishment of a consumer product safety program.

The legislative proposals of the Commission expressly provide for the continua-

tion of the common law rights of action and they also deal with legal technicalities arising out of the very fact that there would be a standard setting agency. It is proposed that in private litigation the fact that a product meets the existing standard could not be admitted in evidence.

6. The administrative procedures involved in setting standards will be simplified. Present law provides various patterns in the administrative procedures which accompany the setting of standards. Fair play demands that all affected parties should have an adequate opportunity to be heard, but some of the most formal techniques for rulemaking ought not to be utilized in safety matters.

The most elaborate of these procedures prevents a final decision from taking effect for years while the matter is litigated in the courts. The toy safety legislation, on the other hand, provides that the standards may take effect immediately and that they can remain in effect while the administrative procedures and any related litigation are pending. Similar provisions are proposed by the Commission. The use of any such grant of power to make the standard effective immediately is likely to be conditioned upon a finding of a risk of imminent hazard to the public health and safety.

The Commission also proposed that in the event of a judicial challenge to the determination of a federal agency, the burden should be on the challenger to establish that the agency acted in an arbitrary manner; if the challenger is unable to establish this, the decision of the agency would stand.

The incorporation of these two proposals would make any safety agency much more effective than any existing agency and can be expected to draw much fire from the industrial community. However, the Supreme Court has upheld more rigorous procedures when individual rights are involved and the Commission rightly felt that it would be difficult to justify requiring more arduous procedures for dealing with business, particularly where matters of health and safety are at stake.

The Commission proposed that a comprehensive program of data gathering should be the responsibility of the consumer product safety agency. They pointed out that while public health officials have long seen the

need of such data gathering in programs to control the spread of disease, it was not until sophisticated techniques were available to analyze data that etiological studies could be conducted. The Commission supervised the establishment of studies which enabled it to focus its limited resources upon several major contributors to consumer injuries. These studies have led to increased sensitivity to the role which adequate data gathering programs could play in product safety generally.

Whether or not comprehensive consumer product safety legislation is passed in the immediate future, there is sure to be a serious effort to increase funding for study of the causes of physical injuries and to isolate the role of defective and inadequately designed products in the incidents leading to those injuries.

While it is never wise to underestimate the power of the forces of the status quo, it does not seem too rash to assert that the Congress will create a Consumer Product Safety Commission in this decade. The work of many dedicated consumer advocates has clearly shown that the present level of industrial response to the need for consumer product safety is so inadequate that we cannot leave safety to the whims of the marketplace. And the all too frequent success of special interest groups in frustrating existing safety programs by seeing that neither the Executive nor Congress provide safety administrators and the necessary resources to do a competent job, clearly points to the need for a separate agency with only one function in government—promoting consumer safety.

Although the current doctrine in public administration may deplore the single purpose agency, the logic which lends support to the general rule also supports the case for an exception here. The single purpose agency is often too vigorous in promoting its role. Yet, in the case of a consumer product safety agency the presence of substantial adverse special interest groups will prevent any excesses on the part of the agency; indeed, these interests would be able to bury the program if it were located in a multipurpose agency.

I conclude that the Congress will be moved to enact legislation which will provide for an independent consumer product

cy and that the resulting agency most of the powers suggested by section in its final report.

redict that the proposal for an Consumer Safety Advocate will necessary. This is not due to any in the proposal of the Commis- the expectation that the Congress an independent consumer agency have the right and duty to be before all federal agencies.

must be safe for the environ- ell as safe for the user. Our nem is the safety of the users Mounting evidence clearly indi- ve will soon have to face up to environmental safety in product can not escape the fact that products are having a serious our collective safety as a result our collective safety as a result of their environmental implications of their composition. Where this concern ressed in the federal government : to products is yet to be deter-

mined, but by the time the consumer product safety legislation is considered we will also have to face this question.

We must all become advocates for consumer safety. The single most important factor in the increased federal activity in the consumer product safety area is increased constituent sensitivity to the failure of government at all levels to take adequate steps to protect the consumer.

While the members of the Congress will differ about the best means to meet the demands of the public for increased action with respect to product safety, each of them desires to be responsive to the demands of their own constituents. Those in the consumer product safety movement must recognize their role in leading public opinion and in channeling that opinion with respect to specific proposals.

Your help is needed. If manufactured products threaten our physical and environmental safety and we do nothing, we deserve no more from government.

CODES, STANDARDS, AND REGULATIONS IN PRODUCT SAFETY

By SAMUEL M. HART
Acting Director, Office of Product Safety,
Food & Drug Administration, Washington, D. C.

and Drug Administration has iness for some time, enforcing ; to insure safe, pure, and whole- safe and effective drugs and devices, and safe cosmetics, and hat all of these products are informatively labeled and pack- s basic commitment is and al- en to protect the American con- product hazards.

ber 1968 FDA centralized its es for safety of products used id the home by establishment of of Product Safety. Our office composed of four divisions: fety Studies, Poison Control, Substances, and Product Re-

At present the National Injury Surveil- lance System does not include injuries as- sociated with traffic, other than those involv- ing pedal cycles or pedestrian. We do not collect data on industrial or occupational injuries other than those considered to be of the farm home type. Neither do we collect data on injuries resulting from acts of vio-

lence, such as suicides and homicides. In essence, our data collection activities are directed to those products purchased on the open market and intended to be used by the consumer or his family in or around the home.

We have been collecting injury data for approximately one year, and as of September 25th we had 165,428 cases in the computer. We receive about 4,000 cases per week. Our National Injury Surveillance System includes 142 reporting sources in 40 states—31 covered by contracts, 61 reporting free of cost to the government.

Essentially, our system works this way: information is transcribed from emergency room service records to forms suitable for data processing. Hospitals mail them to our Cincinnati division where they are coded, edited, and analyzed. Analyzed data serves as a guide for determining program priorities and as a basis for implementing educational or preventive programs. Also, this data has proven to be useful to reporting sources, state health departments, and other health agencies. Two quarterly individual source print-outs and one national summary have been returned to participants in the system. Hospitals have indicated that the information has been valuable in determining personnel, supply, and budgeting needs for emergency room procedures and in providing a good reservoir of information for community safety and prevention programs. We have received and honored special requests for information on specific consumer products from various state agencies as well as other government agencies.

Our surveillance system is intended to characterize only the general problem of injuries involving consumer products, because in most cases reports from emergency room service records do not indicate the degree of product involvement. Usually this information can be obtained only through follow-up investigation; that is, by contacting the victim, relatives, or other individuals who may be aware of the detailed circumstances of the injury. Only from these investigations can we identify any behavioral factors or environmental conditions that may have been associated with the injury. This must be done if we are to assess adequately the degree of product involvement. Presently our investigation capability is limited to our two

injury units, five pilot type investigation contracts, and a limited number of investigations being done by FDA field personnel.

We do not at this time have any statutory authority to insist that manufacturers take positive action to eliminate electrical, mechanical, or thermal hazards from any products other than toys or other articles intended for use by children. In these cases, we will discuss the problem with the firm involved and solicit voluntary action to correct the problem. If such action on the part of the firm is not adequate or if the hazard is great, we will use our communications media to alert and inform consumers of the hazard.

Our Division of Poison Control works as the national clearinghouse for 560 poison control centers throughout the United States. This division collects information from industry on the formulation of household products and drugs, reviews the toxicity, determines symptoms if ingested, and recommends treatment. This information is recorded in a standard format on 5x8 cards and distributed to local poison control centers and to some medical schools where it is used for teaching.

The division also has established a reporting system to collect data from poison control centers on products swallowed and data on the extent of injury and the treatment. A standard form was developed and is distributed to those centers desiring to use it. We now process about 115,000 reports a year—80,000 involve children and the remainder involve teenagers and adults. This data is tabulated by computer and used by FDA, the Department of Agriculture and, to a limited extent, by the Department of Justice. Individual tabulations are prepared for each center and state and national tabulations are published annually.

The division also develops research and demonstration programs to educate parents to the dangers of poisoning and methods of prevention. One such demonstration project in Charleston, South Carolina, resulted in a guide for teaching poison prevention in primary grades. The program has been used extensively.

In 1960 a law was passed authorizing the President to declare the third week in March each year "Poison Prevention Week."

use this week to emphasize poison prevention in all of our media and we work in industry, state, and national medical organizations, and public organizations in dining efforts to reach as many as we can with information on poison prevention. The use of index cards for distribution of medical information has not been completely satisfactory. Cards become lost and faded, revisions require reprinting, which is 90 to 120 days. We now are conducting a pilot study of a computerized retrieval system with a central computer and communication lines to selected centers. The program was opened at the Poison Control of Children's Medical Center in Boston on September 18 and so far is working very well. We are enthusiastic about the value of this program.

...the Hazardous Substances Act was passed and became the Office of Product Safety with the Department of the Office. With a capacity for determining chemical and toxic hazards of household products, there is authority within this division to products or to prosecute or to enforce from the sale of products which is, which are not adequately labeled to inform consumers of them. In cases where the product is so that adequate labeling cannot be given, there is authority to ban the

Division of Product Research, although not staffed at the present time, will be established to render a capability to evaluate products for mechanical, electrical, and thermal hazards. We plan to start this division this year. We can anticipate that legislation will be passed providing control of electrical, mechanical, and hazards in all consumer products to that which was enacted in the Consumer Product Safety Act of 1970.

Section 401 of the Toy Safety Act of 1969, was one of three laws enacted in the spring of 1969 that placed the responsibility for child safety on the manufacturers of children's toys. The first such law passed by Congress was the Federal Hazardous Substances Act of 1960, which requires that chemical or toxicological substances for home use be labeled to warn of potential danger because of

accidental injuries each year of which 700,000 to one million are estimated to result from toys and other related children's products. This makes the task of reducing injuries to children from these products a challenging one.

To give one example of a voluntary corrective action by industry, we followed up on a complaint about the potential hazard of sharp wires and staples in a drill manufactured in this country. According to the complainant, her 2½-year-old daughter in playing with her doll, exposed a sharp wire in the neck and staples in the legs. We contacted the firm and, as a result, they have redesigned their products to eliminate these problems.

We are doing what we can with a limited staff in the area of consumer education and information on toy safety: e. g., articles will be appearing in Sunday magazines of newspapers in about 26 major cities. We also have worked with FDA consumer specialists stationed in our district offices in consumer education and information efforts on toy safety.

In activities carried out by our Division of Hazardous Substances, one of our major problem areas under the amended Act has been with fireworks such as cherry bombs, M-80's, and Silver Salutes. These fireworks are responsible for almost all of the injuries and fatalities we have investigated. A very difficult enforcement problem exists because of an unavoidable loophole in the law. Because of a need, the regulations contain an exemption for use of such fireworks by growers and ranchers for crop protection purposes. Bootleggers, of course, were quick to take advantage of this and have been keeping fireworks stands supplied. Our main problem has been in developing evidence to prove that bootleggers are intentionally misusing the exemption. We feel we have made

progress, though. We have instituted a number of legal actions including seizures, injunctions, and criminal prosecutions, with the result that we have eliminated a great deal of the problem. To further assist, we recently revised the regulations to restrict even further the availability of agricultural fireworks. Among other things, the new regulations require a system to "keep tables" on fireworks intended for agricultural purposes. We are hoping the new regulations

Christmas tree lights with faulty wiring he market and we will survey to make that those available to the public do not have this defect.

Flammable fabrics is another area of inquiry in which we share a vital concern with other government agencies. The Flammable Fabrics Act passed in 1963 covered articles of wearing apparel and excluded pajamas, footwear, and interfacing. It was amended and broadened to include articles of wearing apparel and furnishings in homes, offices, and public places.

Consistency for implementing the Federal Act is divided between four agencies: the Federal Trade Commission for enforcement and administrative functions, the Department of Commerce for research and development, the Treasury Department for product standards, and the Department of Health, Education, and Welfare (in cooperation with Commerce) for conducting a continuing study and investigation of deaths, injuries, and economic losses resulting from fires, and burning of products, fabrics, or materials.

HEW responsibilities were made the Injury Control Program of the Health Service and HEW had been making inquiries associated with flammable fabrics prior to the enactment of the amendment as part of its overall injury control program. Investigative work carried out by three injury study units in Boston and Denver, and one in Atlanta. The units not only studied flammable accidents, but all accidents related in serious injuries whether behavioral or not related in nature.

In 1968, as a result of the departmental reorganization, FDA assumed the HEW responsibilities under the Flammable Fabrics Act. Primary responsibility for investigating flammable fabric accidents remained with the Boston and Denver injury study units. The Cincinnati unit was assigned to the agency in the reorganization. In the efforts of these units and others under contract, FDA has been supplying the Department of Commerce with approximately 200 investigations and reports for their use in determining if existing standards are needed.

This was the situation until about last April when Commerce requested a five to ten fold yearly increase in the number of investigations. To accommodate this request, the Commissioner authorized and we developed a field program designed to accelerate the investigation of accidents involving flammable fabrics. We hope this will generate approximately 1,000 investigations by January 1971.

With the immense number and variety of products on the market, and with the thousands of new products that are introduced annually, we realize that protecting people from product-related injuries and deaths is an enormous task that requires a multi-lateral approach. The data we are gathering and computerizing will be worth nothing unless we have in-depth investigations, analyses, evaluations, and consumer education. We are beginning this fiscal year to obtain in-depth information from contract sources. We realize full well the importance of consumer education to promote responsible, safe use of products that cannot be made devoid of certain inherent dangers. And we look forward to expanding our education and information efforts.

I don't believe that anyone would question that an identifiable consumer movement has made itself known to us within the past few years. Safety is an important part of this movement. A number of bills are now pending in Congress which would bring about certain benefits for the consumer. Many voluntary organizations in addition to approximately 40 Federal departments and agencies have interests in some aspect of consumer protection. As an example the Senate passed the Poison Prevention Packaging Act of 1970 to further protect children from serious injury or illness from household substances. This bill states that the "Secretary of HEW" may, upon finding that special packaging of a household substance is necessary to protect children from serious injury or illness, and after consultation with a technical advisory committee, establish standards for special packaging. The Secretary must also find that the special packaging required is technically feasible, practicable, and appropriate for such substance." The technical advisory committee will be appointed by the Secretary of HEW. It will have no more than 18 members to be equally representa-

the from HEW, Commerce Department, manufacturers of household substances, scientists and physicians, consumers, and manufacturers of packages and closures. The bill describes "special packaging" as packaging designed or constructed to be significantly different for children under six years of age to open or obtain a toxic or harmful amount of the substance therein within a reasonable time and not difficult for normal adults to use properly. This does not mean packaging which all such children cannot open or obtain a toxic or harmful amount of within a reasonable time.

Numerous other safety laws have been passed; for example, one would improve railway safety by increasing Federal con-

PHYSICAL FACTORS INFLUENCING SAFETY OF THE ELDERLY

By F. C. SWARTZ

Chairman, American Medical Association Subcommittee on Aging, Lansing, Mich.

The elderly are a heterogeneous group bound together by only one common characteristic: their chronologic age. The elderly of today represent an accumulation of physical characteristics that have to be dealt with realistically if we expect to improve our safety records.

The elderly of tomorrow (a generation or two hence) will, hopefully, represent an entirely different accumulation of physical characteristics. Because of the very nature of this improvement safety programs of the future will have to be rebuilt. The increase in life expectancy and depth of living will give us chronologically older people who are better physical specimens. Many of the basic defects of today, such as bursitis and osteoporosis, will be as rare as polio.

Let us see what is happening to the concept of aging up to date. This new approach is bringing the elderly into the main stream of medicine. The results are spectacular. Morbidity and mortality do not vary with the age but only with the presence or absence of basic cardiovascular disease. The application of preventive medicine, of the variety we already know, will change all this and give us an elderly group that will

controls; another would give the Secretary of Transportation wide power to establish safety standards for boating and would require all users of boating equipment to display evidence of compliance. There is a proposal to provide an improved and enforceable procedure for notifying customers of tire defects. Ralph Nader is seeking legislation to stop the neglect of safety measures by manufacturers of light airplanes which he charges to be one of "the most lethal of the major forms of transportation in the United States."

The trend definitely is toward greater controls for maximum protection. We, too, are strengthening our activities to increase our effectiveness in product safety protection.

be better physically than most of the younger age group of today.

Many people have said and written much about the aged. These writings constitute the description of the passing scene. Whatever seems to be the characteristics of the older group is considered as occurring because of the passage of time without any thought of all of the other impinging factors to which the group has been subject. No one, so far as I know, has ever spelled out what they meant by aging or the aging process.

What does "aging" mean to you? How precise are your concepts of the changes "so-called" wrought by time? Have you ever stopped to think of the differences that exist between those people whom you called old when you were a youngster and those whom you call old now?

Has it not occurred to you that the concept of aging that existed one hundred years ago when life expectancy was about forty years must have been quite different from the concept of aging as it exists today with life expectancy of 70-plus years.

When the geologist talks about the aging rock on the hill he is not referring simply

passage of time. He uses this term those effects wrought by change, by wind, by rain, and by the sun. This usage therefore with the effects of the passage of there be any such effects), also wrought by the impact of environmental forces. This concept of ss of aging admits that many of s observed are produced by forces the passage of time. This is very as we shall emphasize from time t is this concept that gives us hope. concept that gives us an area that attack in order to change the so- cess of "aging." All we have to dify those environmental factors ve contributed these certain effects. people, from ancient times to the ent, have spoken about signs and such as the tottering gait, the and, the white hair, the bald pate, lken shank, the jiping voice, the h, the thickened glasses, the forget- the narrowed mental horizons and of motivation, the creaking joints ss and aching, as if these all were a great syndrome which would lead agnosis of the aging process.

question at the moment then is: ese characteristics and many others o by various writers the result of ge of time? If this is true, then at d age we should all represent ap- ly the same proportion of the istics listed above, and as time goes ould expect to acquire all of the f the characteristics listed.

these stigmas of aging are con- o result because of the passage of are is no possible way for us to the final picture of old age. There : who support this idea, both among essional and the non professional. I y to report, however, that in the 7 years more people in the health commencing to realize that any and he signs and symptoms witnessed he aging represent some functional nent related to the presence of a ondition or the lack of proper physi- mental exercise, and are subject to etible methods of modern medicine. erms "aging" and "aging process" hangeably used in many medical with the term "degeneration." There

is a growing recognition that these terms need some definition and some separation. All too frequently the busy scientist, when he arrives in the middle or the end of a paper and has a few odds and ends that are unexplained, sweeps them under the rug and says these things are due to the aging process. More critical minds, however, are beginning to place these changes, which are observed at any time in life, in their proper category.

From one of the latest works on medicine dealing with older patients, *Clinical Features Of The Older Patient*, by Joseph T. Freeman, M.D., we would like to quote several passages that indicate the tendency to recognize changes as being related to the proper etiologic factors and also to indicate that some other changes which are usually associated with the older individual are quite predominantly found in a younger age group.

Dr. Warren Andrew on page 72 of the above named text says, "The characteristic of an aging muscular apparatus is the picture of an atrophy of disuse."

On page 91 Dr. Frederick T. Zugibe says, "The failure to date to define biologic aging adequately resides in the controversy whether ostensible morphological, biochemical, or physiologic changes are related primarily to senescence or to disease. For many years arteriosclerosis was believed to be a part of old age. More recent investigations have shown the invalidity of the thesis that a man is as old as his arteries. Some septuagenarians and octogenarians have been found at autopsy to have coronary arteries relatively free of plaque formation, whereas individuals who have died before the age of thirty have shown occlusive atheromatous lesions. Major William Enos of the United States Army Medical Corps revealed that about 77 per cent of a group of American soldiers in their early twenties who were killed in Korea had atheromatous deposits in their coronary arteries. These were heavy in over 40 per cent. Such observations are prima facie evidence that arteriosclerosis is not an inevitable product of chronologic age alone, but the role of senescence of course is not precluded." Dr. Zugibe further states, "The earliest morphological alteration observed in human aortas, coronary arteries, and cerebral arteries was a primary deposition of lipids. Lipid was first observed in the aorta of fetuses but was rarely ob-

served in the cerebral arteries before fifteen years of age. Lipid was absent in the coronary arteries of fetuses but made its advent in the first few weeks after birth."

Dr. Andrew Fuller says on page 109 of the same book, "The general management of elderly cardiac patients should differ little from that planned for younger individuals."

And finally, in this incomplete list of instances where the weight of testimony indicates that age is probably not a factor in the production of any symptomatology or architectural change, we have a quotation from the latest book on emphysema and bronchitis by Petty and Nette who say simply, "Age itself does not damage the lungs."

How old are you? It doesn't matter whether you are twenty or seventy. What part of you is seventy years old? You all know that in all living structures the cells are growing and changing and being disseminated and destroyed and reutilized. One doesn't have to take the body part by part, section by section to discuss the living characteristics of cells, because in essence they are essentially the same. The only one I am not really sure about is the nerve cell. But to make this thing simple, the red cell in the adult human individual is supposed to have a life span of about 120 days. The other cell groups in the body probably vary to a shorter or longer period of time, but certainly none run for twenty years. What part of you can thus be said to be as old as your chronologic years?

We don't expect at this time to have all or part of the answers. We would merely like to raise in your mind some definite questions about some of the concepts that represent the past and present climates of opinion. We ask you to be wary of the uncritical acceptance of terms such as degeneration and aging and the aging process and we would hope that you will become completely liberated from chronologic snobbery.

The Committee On Aging of the American Medical Association has studied this whole area for some 15 years and has come to the conclusion that they can find no disease entity or physical or mental condition that resulted from the passage of time, nor was there any prophesied picture or condition that could reasonably be expected

to occur in anyone after the passage of so much time.

Although the term "geriatrics," which means the study of the diseases of aging, is used quite frequently the committee was unable to find a disease entity that was of necessity related to the passage of years or time. Arteriosclerotic heart disease, high blood pressure, arthritis, and cancer are found in the youngster, and measles, mumps, chickenpox, poliomyelitis, and cancer are found in the older. The clinical picture under these circumstances varies only as the seed and the soil vary.

This complete breakdown of past philosophies leads us to pay serious heed to the results coming from recognized research laboratories. More and more it is indicated that the so-called degenerative diseases of man result from the impact of environment on that prefabricated hereditary structure that is man. In the laboratory we see these diseases occur in animals exposed to hunger, extremes of temperature, lack of oxygen, infections, loss of blood, or fear, with little relationship to the age of the animal. In other laboratories the environment is regulated in the direction of protection for the individual from the effects of environment, and we have members living for unbelievably long times.

The chronic conditions, including the diseases and chronic illnesses and long-term care cases which constitute the major problems in medicine today, result from the recurring and irritating effects of environment over a long period of time; they are the results of these irritants and not of the passage of time.

What must be added to this concept which does not really come under the heading of recurring or irritating effects of environment but does come under the less than ideal care that the individual accords the castle in which he lives? The pot belly and flabby muscles that result from lack of exercise, the loss of habits of study and the forgetfulness that come when the mind is not used, and the painful knees and flat feet that come from long time pounding by too much weight present a picture of dilapidation that represents long time lack of care, not the passage of the hours.

A few years back it was not uncommon to hear the physician say to the patient, "Well, what do you want—a new machine

e, from all of these old parts?" This risk is rarely heard in present day medicine, including open heart surgery, so as the patient presents himself as a malleable physiologically functioning unit to the physician.

Medical and para-medical services, including para-physician personnel must be organized so that something can be done to realize that something can be done to the diseases found among the oldsters. Days of condescension, medicine to the old and grandiose are at an end. The old are people who are personalities and names and should be recognized as such. The sense of being recognized and the sense of belonging are considerations that we can do without.

One may emphasize again at this point many of the so-called infirmities of age directly from lack of conditioning. Numbers of individuals after leaving school or college settle down to a life of breadwinning that uses only a portion of their muscular or physical potential. Under these circumstances it is hard to understand why the physical horizons are cramped, why the hand shakes, and why the gait becomes uncertain and tottery. Being true to it behooves the young and old to continue some type of physical development and exercise throughout life, instead of neglecting these important duties after leaving school.

Stiffness and mental retardation result largely from lack of attention, failure to exercise, and loss of motivation. This largely be prevented if we will all continue to encourage some habits of study and in school. Some serious reading and writing should be a part of every man's life. The muscles are strengthened and they are sharpened only by proper physical exercise and mental activity.

A whole program aimed at retarding the aging process by improvement of physical and mental activity would fall far short of accomplishment if we did not at the same time strike a blow for moderation in the use of alcohol, tobacco, and food. Propaganda must be directed to the brainwashed oldster, and increasing must be made to prevent the brain of those coming behind. The fatal fit over the instep.

65 years is over the hill condemns the oldster to a period of ever narrowing horizons until the final sparks of living are the psychoneurotic concerns with the workings of his own body.

Aging is really living, growing, and developing so that the final days and contributions should be far different in the future than they seem to be today.

Further retarding of the aging process can be accomplished through other professions, through parents and teachers, all by selling some degree of self-discipline to the coming generations to such an extent that a program of physical exercise and good posture, daily mental exercise (not of the bread and butter kind), and careful regulation of the body weight becomes the principle rule of living. Add to this the protection of our present immunization program, cap it off with periodic health appraisals, and the life expectancy figure should increase ten years with one generation.

Home accidents were fatal to more than 28,000 persons over 65 during 1968, according to the National Safety Council. Approximately half of the fatalities resulted from falls. Why so high a toll? It is most difficult to determine. For one thing a host of factors are usually involved in home accidents (state of mind, physical condition, poor lighting, faulty or worn-out products, slippery floors or rugs, unusually sharp edges, loose nails, etc.). For another, accidents among those over 65 involve more females than accidents among any other age group.

When one listens to their story in the hospital, carelessness and the lack of sensible precautions seem to be major factors—especially in fractures of the hip.

In taking care of our older patients we emphasize the need for daily physical and mental exercise to prevent physical deterioration and senility. Then before they have an accident, we discuss the statistics on home accidents with them and suggest a few guidelines:

1. Sit a moment before you stand. Stand a moment before you walk, and avoid sudden changes of position or direction.
2. Never move in any direction except in the way you are looking.
3. Wear shoes with solid bottoms, a broad heel surface, and laces for a snug, supporting fit over the instep.

4. Learn to stand and walk with the feet further apart than usual, so that the body is supported on a broader base.

5. Turn corners with the pivot on the outside foot, as the soldier does, to keep a broad base of support.

6. In going up and down stairs, try to keep a free and empty hand on the side rail just in case.

7. Motivate your walking so that the physical and mental activity work in the same direction. With this dual concentration there are less moments of mental and physical indecision which frequently bring both feet into one pivotal position and impair balance. In other words, just think where you are going before starting.

It is evident, I think, that this precautionary kind of advice can help older persons exercise some degree of caution, and is helpful to people of all ages, as well. But to simply imply that older people must "slow down" per se is not especially helpful and

may even increase the risk of home accidents. To avoid action and sit still instead of performing routine exercise leads to retardation of reflexes, balance, perception, eyesight, muscles, or mental awareness. Aging is really living, growing, and developing. Living defensively is not the way to avoid home accidents past age 65.

Following the general rules of safety in the home can help in avoiding accidents such as falls regardless of age. For example, there should be proper lighting near all stairways; carpets and rugs should be securely fastened to floors or rest on non-slip mats; hand holds are important in the bathroom area, particularly inside the shower or tub; wet spots on the floors should be wiped up as soon as possible; and loose clothing that can drag on the floor should be avoided.

People of all ages need to follow these common sense rules for their protection. Should the home safety lesson be spoon fed to persons over 65?

PSYCHOLOGICAL FACTORS THAT INFLUENCE SAFETY OF THE ELDERLY

By SHELDON S. TOBIN, Ph.D.
Assistant Professor, The School of Social Service Administration,
University of Chicago, Chicago, Ill.

In a paper on psychological factors that influence safety of the elderly, I feel decidedly more comfortable in focusing on the psychology of the aging process than in drawing implications for home safety. To understand the psychology of aging, and thereby the implications, three general questions must be considered. After a consideration of these questions each of you, hopefully, will be able to apply some general principles within your own specific areas of expertise.

First, who are the elderly?

Second, are there any uniform processes of "becoming elderly," processes that may help us understand aging in others as well as in ourselves?

Third, what are the crises associated with "becoming elderly," crises that again have implications for those whose safety we wish to assure as well as our own?

In answering the first question, let us first look at the variety among the aged. Among the over 20 million Americans over age sixty-five in our society, some are sixty-five years old and others ninety. Some male, some female. Some with resources, some without. We are obviously dealing with a rather diverse group when we talk of "the elderly." However, not only do the aged vary on age, sex, and economic resources, but also from our perspective as professionals. For example, because of our expertise and interest, we may wish to focus on the retired worker, or the widow, or the decrepit eighty year old who needs an institutional environment, or the rigorous seventy year old who would like an apartment in the center of the city. Our perspectives vary considerably, from that of the administrator of the state mental hospital who sees the aged as inundating his inpatient services,

of the public health nurse who sees the bound aged as an ever increasing in our society, to that of the architect who sees the more healthy aged as the most sophisticated housing

perspective on "Who are the" is the historical perspective. For are those who are now forty years to need the same services when seventy as do those in society who seventy years old? (A more question may be to ask: what he attitudes and expectations of our youth when they become aged?) I appear that the next generations aged, those becoming elderly, do in different services than those aged, such as a guaranteed annual health services, and comfortable and that these services are expected not demanded, to facilitate a instance in the community where ability of a wide array of services f diverse life styles and the free-press one's individuality.

we answer "Who are the elderly?" e perspectives we begin to realize aiming for the elderly in the area safety, decisions must be made that ly related to the present hetero- among the aged but also to a target group among the aged, as the future aged.

and question is: Are there any processes that characterize aging ss? It does appear that we can ain generalizations about this spite of the variety among the in introduction to these general- usually focus on our own aging. example, I lecture to the younger dents in social work, I begin as

e of you the field of aging calls ons to the generation gap, or of generations, in which you visualize the distance between l you and the aged others, as it may be to think of it, ne day you shall be the other. process of becoming the other, u will undoubtedly change atti- tives. Motives that are fore-

most now will be replaced by other motives; roles predominant now will be replaced by other roles; crises of the young adult will be replaced by crises of the latter years. These replacements would be catastrophic if aging was sudden; if, for example, one day you were twenty and next sixty. Between twenty and sixty, fortunately, there is a lot of living to do, so that personal changes will occur within the vital roles of work, marriage, and parenthood that will transform you and serve as preparations for phases that follow.

What process will these young adults, in their twenties, undergo as they age? One approach to an understanding of the process is to focus on the phases of adulthood that Erik Erikson postulated to occur during the adult life span. After adolescence, for example, he postulates a stage of "intimacy vs. isolation." In this stage the adult enters commitments to the vital adult roles of marriage, parenthood, and work in which the task is to merge one's self with another, to share intimately with another as usually occurs in heterosexual relations that become stabilized in marriage. The capacity to gain intimacy, in turn, obviously relates to resolutions of earlier stages in development. Also to be considered is that in a heterogeneous society such as our own, where change is relatively rapid due to technological advancements, the arenas in which to obtain intimacy tend to be more varied than in more structured societies where the rules of the game are much clearer and possibly more rigid. Man, fortunately, is not simply molded by external circumstances but, through transactions with others within a shared social system, is able to carve out a set of relationships with others at home and at work that will permit a sense of merging and unity.

The next stage, of "generativity vs. stagnation," permits man to gain a further unique human experience. During this stage there is preoccupation with the establishing and guiding the next generation, which can serve to give one a sense of investment in products of one's own creation. Here too, as in the gaining of intimacy, there is not a uniform simple path toward generativity. It is indeed possible to find generativity not only within one's children but also in other inter-personal relationships. The essen-

tial ingredients to the gaining of a feeling of generativity involves an identification with the future in which oneself and the present are transcended; where the potential for a feeling of self-transcendence is a product of man's humanness, of man's capacity to symbolize connectiveness with other men and the history that is yet to come. If a feeling of generativity is a feeling that is so very human, it is necessary to ask how and in what way such a very human feeling can be squashed by inner problems and external crises.

The last stage (Erikson's eighth in the life cycle) focuses upon the stage of "integrity vs. despair" in which, if one lives long enough, one must confront one's own personal death; and in which, the task is to view one's life as meaningful and inevitable. Thus the aged person can gain integrity through "the acceptance of one's life as meaningful and inevitable and the people who have become significant to it, as something that had to be, and that by necessity permitted no substitutes." To younger people, the possibility of gaining integrity when confronted with death does not ring true, but it must be remembered that for those of an advanced age, changes have ensued in adulthood so that a modification of motives and attitudes may serve to prepare the person for this final confrontation.

Thus in becoming elderly the human being is constantly maturing as a result of confronting and mastering "the natural crisis of adulthood." The task of those concerned with the well-being of the elderly, therefore, is to help facilitate the positive potential inherent in each phase, to facilitate intimacy, generativity, and integrity.

Another view of the process of aging, the disengagement hypothesis, has been advanced by Elaine Cummings and William E. Henry in their book *Growing Old*. These authors, as well as others with the Committee on Human Development at the University of Chicago, have focused on this hypothesis which posits a shift in modes of relating to the environment, of dealing with impulse life. This shift is from active to passive modes of mastery, from energy directed from the outer world toward the inner world. It would appear that psychological disengagement includes a change in

behavioral motivation, with possibly a lessened desire for approval, increased freedom of choice of life rewards, an increased tendency to select short-run gratifications and, finally, a withdrawal from intense emotional attachments to people and objects. These components of psychological disengagement, however, should not be construed to imply that passivity is to be encouraged or leads to satisfaction. Evidence suggests the contrary: that these psychological changes may lead to a freeing of relationships and obligatory responsibilities so that social engagement when directed by one's unique needs relates to feelings of satisfaction for the very old.

Of importance is that these changes can be found in people as early as their forties, and thus occur before what we typically consider the losses of aging. For example, this is most clear when middle-aged people are asked how their interaction with people has changed in the past ten years and about the quality of their present interaction. While there is a perception of decline in interaction for persons in their fifties, the actual change in quantity and quality of interaction does not occur until the sixties. Thus, in a sense people are anticipating what is to occur in the future, and are preparing for the lessened interaction that is to occur either gradually or more abruptly with the loss of spouse or retirement. These data suggest that some of the "inevitable" changes in aging help us to adapt to future events in the life cycle. Possibly these changes are psychological rehearsals for future social events and become important facilitators for the successful mastering of future events.

The third question was: What are the crises of aging? The crises on which most investigators agree are five in number:

First, internal and external bodily changes, which implies a need to transcend physical deficits and to maintain a consistency of self-image in spite of these deficits.

A second crisis is loss of status. As part of our youth-oriented culture, not only may machines be obsolete, but also the aging person may experience personal obsolescence and a consequent loss of status as a productive society and family member. A quite significant problem of obsolescence is related to the computer revolution where men as young as forty may find

would be considered: dependency and illness. For example, in relation to dependency it may become necessary to accept early conflicts going back to one's socialization. Thus, where one has re-earlier conflicts regarding one's own lenity, these conflicts may be evoked one has to be dependent on elder m. Recall, however, that an added diff-aries because now that we have who are eighty, their own children re in their fifties and sixties, so that ry old have added problems of being lent on persons who are themselves

These relationships among family ers must be an important consideration planning of housing. An environment not only be optional for the aged per-ut also must permit the relating to n, grandchildren, and, increasingly to grandchildren.

Jealousness refers to the expectations of gratification. Where we have all had ies of gratification with specific others r lives, it has been with these others we have looked forward to future cation. Indeed, if we go back to the f parenthood, we see that as the fam- iposition changes in adulthood, it is ne's spouse that one looks forward to cedon from responsibilities when one's m leave home, and thus future ex- ions are tied in with intimacy and cation from others. Thus, if the older is feels hopeless because the loss of

does not permit an expectation of gratification, it is necessary to re- ish relationships that permit them to sense of futurity and of hope. Thus, omes important to structure the en- nent so that there is easy access to persons that can help in the re-es- ab- nt of relationships and afford activ- itation can be looked forward to for cation.

en we focus on the very aged, let's ose in their late seventies and older, ve found that having a sense of fir- or hope is important in their resist- of stress. This becomes most clear in- tudies of predictors of vulnerability to tionalization among the aged. In this igation we studied 85 aged persons age age of 78) before entering homes

for the aged when on waiting lists. We then followed them for one year after institution- alization. After one year, 44 had remained es- sentially intact, whereas 41 had become more uncontact and some had died. When we then compared the intact survivors to the non- intact and dead group, some interesting pre- institutional characteristics were found to be predictors of those who were more vul- nerable.

Not only was having a sense of futurity important for intact survivorship, but also having personality traits that "fit," or were congruent with the demands of the institu- tional environment. For the environment we studied, these traits included aggressiveness; a distrust, or distancing, from other res- idents; and a narcissistic preoccupation with one's body image. Thus, different environ- ments offer differential rewards for varied coping styles. Also predictive was cognitive adequacy, especially the ability to use pres- ent interpersonal contact to reaffirm one's self-image. A further predictor was the willingness to deal with the impending event, so that those aged who denied the reality of impending institutionalization tend- ed to do less well. Our hope, of course, is that the more we can predict vulnerabil- ity to relocation, the more we can identify the vulnerable and help their adaptation to the relocation environment. Of probably more importance, however, is the need to help maintain the elderly within the com- munity. Indeed, at present there appear to be home-bound aged for every aged person who is institutionalized.

Recently we have identified the types of services would-be residents in a home for the aged need to maintain comfortable living in the community. The network of services includes direct casework services with the aged individual and family, home-health ser- vices, sheltered-community housing with rec- reational facilities, medical diagnosis, day- care services (where the aged can spend the day in a home for the aged using group work and medical services), and money. Each of these services has its own complex- ities. For example, in working with the aged client, sensory deficits and poor mo- tivation must be considered.

It may be, therefore, these aged who need a protective environment within their own homes who most need your expertise!

PREVENTIVE MEASURES TO MINIMIZE ACCIDENTS AMONG THE ELDERLY

By MARIE C. MCGUIRE
Program Advisor for Problems of the Elderly and Handicapped,
U. S. Department of Housing and Urban Development, Washington, D. C.

Creating good living environments for the older population is of increasing national im- portance, part of the growth in Federal, state, and local programs for this population group in all areas of social, economic, and health concerns. In addition, the growing number of national organizations, many of them organized in the past ten years, boast- ing millions of older people as members, as well as strong congressional interest, would indicate that the older consumer will have increasing opportunities to express his point of view and have his needs responded to.

As an example, the Department of Hous- ing and Urban Development has three major housing programs specifically designed for older people with a total of approximately 400,000 dwelling units. The largest of these programs is low-rent public housing re- sponding to the needs of some of the over five million older people with very limited incomes, many of them under \$1,000 a year. For the most part, this program provides housekeeping dwellings for the well elderly in low and high-rise buildings. Second is the FHA 236 insurance program responding to the needs of the middle income group; and third, the FHA insurance program, Section 231, for the higher income group. Other housing programs provide shelter for the elderly, although not specifically enacted for them. In addition, HUD also assists with the financing of nursing homes, intermediate care homes, and nonprofit hospitals, all of which are extensively used by the elderly. These special programs represent an invest- ment of several billions of dollars. It is now a very important segment of the hous- ing market and, based on the increasing number of older people, the demand can be expected to increase. Affecting this mar- ket also is the current trend to decrease one's housing space when the last child marries and many early seek a living environment more responsive to the later years. When retirement housing is undertaken in the 50's age bracket it is realized that this early

move permits putting down roots, making new neighbors, and establishing an inter- dependence of neighbor to neighbor that grows in importance as years and dependency increase. While not too many accept real- isticly at this early age, the number is increasing.

As has been pointed out, we cannot cate- gorize the older population by calendar years. The 20 million people 65 and over in our population vary greatly in race, creed, edu- cational attainments, income, living condi- tions, health, skills, and aspirations. They also include distinct generations of older people. Yet society tends to group them together at an arbitrary cut-off point, as though they were all alike. We know this population group offers a tremendous reser- voir and diversity of skills, experience, and wisdom which they need to use and which the nation needs. This conference, with its emphasis on home safety, also, at least in planning, must be concerned, I think, with the 42 million people now in the age bracket of 45 to 65. Undoubtedly, their charac- teristics will be different from many of today's older population. We may expect fewer im- migrants, more education, and better health. It was interesting in the recent White House Conference on Food, Nutrition, and Health to hear one research scientist say that our species today should have a healthy life to age 125, after which we might expect some decline.

What then is the implication of this phe- nomenon of longevity, and the charac- teristics of need related to the living environ- ment and particularly to its safety? Has our research sufficiently delineated the dis- aster features of the home, and have we in turn communicated the findings to the hous- ing professional? I would be negative on both counts.

Both the potentials and the onset of limita- tions of older people as distinct from younger groups must realistically be faced. If we are with deliberate intention building for

use, we would not overlook phones bed and a night light by the bathroom.

ly, on our brief list of accident precursors the greatest villain of all— is. If possible, they should be avoided. Often poorly lighted or with at only one end, steps cluttered, so high and treacherous too narrow, worn and rails stopping before the last taken—all of these too familiar characteristics of stairways and steps rate top in home accidents and deaths. It is that true uniform dimensions in and treads for any one flight of stairs sary, and such practical specifications tend to reduce the high accident rate of older people due to stairs alone. I briefly also mention larger physical and biological considerations in apartments for the elderly. The lobby is the important of all social spaces. At its serves as a social, traffic, and visual ion center. Lobbies should provide o sit, walk, play, watch, and also agement to monitor access to upper Studies have definitely shown that al sitting places away from the e grossly under-used, just as floor-sitting rooms or informal food preparation by floor were intended to, not, increase socialization, and self-trait the investment.

solation psychology relates also to rooms in housing developments. Generations are separated according to functions in this room, painting in bridge in another, and so on. Yet v that the chief reason for activity with people no matter what they g, and the "being with" is height—the very diversity of activities going have found that by removing the at separate activities, including the n, the activity area suddenly becomes people creating a feeling of belonging, socializing, and this includes those y sit and watch. Watching the one e represents something very active y older people, perhaps the most bstitute for muscular energy output e can manage, whether the indi-age 60 or 80. Unplanned encounters, ial interaction, plus physical pri-one's apartment dwelling, are char-s sought by all older people. These

may be facilitated or discouraged by the environment's design. Increasing tendency to place social centers on rooftops is an example of needless isolation from more acceptable street level orientation and activity.

To what degree does activity related to the laundry affect friend making and socializing? If in a dark basement, the social aspects of daily contacts is lost. How about a bright room on the first floor leading to an out-of-door drying space? The room would accommodate an ironing board, hanging racks, coffee making equipment, comfortable chairs, and reading materials. What about a laundry room on each floor or every other floor to deliberately promote easy, unstructured gatherings and neighboring?

Placement of mail boxes in the building has similar connotations. They should be placed in relation to sitting and gossiping in order to comfortably wait for mail delivery, often the most important event of the day. Why deprive residents of the socializing aspect of this occasion?

Are there any of us who have not experienced the difficulty of opening heavy glass or wooden doors? Try it when weak or with a heavy bag of groceries, to realize the unnecessary burden on the elderly. Revolving doors often are dangerous and not usable by those with mobility aids. It is obvious that automatic doors are a must.

Placement of signs on apartment floors to easily point the way to one's home are often overlooked. Small signs are not enough when one gets off the elevator at the tenth floor feeling a wee bit disoriented. Graphics, plants, change of color, sculpture, or other identifying objects should be added and clearly placed. Large apartment numbers in the floor in front of the door are helpful. Different colors on doors, lights at the key hole, and uncomplicated hardware are valid in apartment buildings for all ages and essential for comfort of many older people. Short corridors with breaks to permit daylight are most desirable. But if the long, lonely corridor is a must, why not hangings of interest along the way—a potential for delight usually overlooked and, of course, a railing.

Visual as well as sound alarm systems to indicate a crisis or a direct phone system to a switchboard are essential to safety and

to crisis situations. A telephone near the bed should be part of the equipment of all housing for the elderly. An alarm bell when used should be at arm level next to the commode. If two bells are possible, put one by the bed. Benches should be installed at elevator stops and in the cab as well. Slow elevator doors, padded door closures, and electric eyes are essential to safety. Other elevator safety features include an easily reached alarm system, preferably a telephone, to reduce tension and fear. Good ventilation in the elevator is essential. Floor numbers should be large and lighted and indicators placed for easy seeing. Place indicators low enough to be within the reach dimension of the wheel chair person.

We have not discussed balconies, rails, building safety controls, or other features important to the comfort of the elderly. It also would take another hour to delineate the techniques for injecting a sense of status important for successful housing for the elderly. Other considerations of psychological importance are house space for livability and limited apartment house sizes to promote friend-making and to achieve a natural place in the general neighborhood. Very large developments defeat both. Nor have we discussed the importance of something to do as well as a place to live. It is a happy mark of our time that opportunities for creative expression as well as programs are becoming more common for more people in housing developments for the elderly. Generally, these activities spring from coordination between developers and local public and private health, recreation, and other resources. For some, these activities provide a future, something to live for, to look forward to.

But let us move outdoors briefly in our design exploration. The outdoor spaces of many housing environments frequently seem so bad as to defy any probability of their having simply occurred by chance. Needless to say, ramps should replace steps, a mail box should be in the lobby or just outside the door, and a covered place to wait for taxi or bus should be provided. There is a universal insensitivity to the use of outdoor areas which automatically makes difficult or impossible the physical exercise component of good health.

First consideration of designers seems to be placing the building on the land to em-

phasize the structure. Planning for the land use then must be restricted to what is left over. If the building itself does not rule out exercise, the landscaping scheme often completes the job or will provide only for sitting, and not always too comfortably. One site I've seen has a formal paved rectangle facing the blank side of the building with a wall to an adjoining property on the opposite side of the rectangle. The only seats are reglarily-spaced, fixed, flat concrete benches with no backs. Thus, there is nothing to look at, no conversational grouping possible, and active physical discomfort involved in using the benches. Another building has an ample grassy area but only one outdoor bench which is rarely used because it stands in the path of a shortcut used by neighborhood children. Again, benches for sitting will be placed at the rear of a building rather than at the entry and street side, with the mistaken idea that older people like quiet and withdrawal. I do wonder what is so difficult about circular placing of benches to facilitate conversation.

The first consideration, of course, should be the potential of the ground area for out-of-door exercise at one's home. In Germany, I found it mandatory to have running paths at housing developments, usually winding in and out of the shrubbery, which were used constantly by the tenants. Their medical research, like ours, had proven the efficacy of continuous exercise. In this country we have a few examples such as the adult tri-cycling clubs at Grand Island, Nebraska, horse shoe throwing, which is decreasing in popularity, miniature golf, bowling on the green, etc. But our designers too often forget that older people need opportunity for exercise as part of the normal living environment.

If there is an indoor community center, the out-of-door activity should be related to it. It should be possible to observe outdoor action even if one cannot or does not participate. Heated or therapeutic swimming pools are popular, as are walking areas with something to enjoy along the way—arbors, fountains, boulders, sculpture. We find that many older people will exercise or take "constitutionalists" only if the opportunity is home-based, particularly if special clothing, such as shorts, are indicated. Few go to general use parks except to observe. Perhaps there is an unspoken reluctance to be in physical competition with younger people.

all, physical fitness is a quality of should retain as long as possible. all agree that the years in later life are happy ones, full of promise if we energy and zest to use them well. y way to remain alert is to be lively, continue that way we must have ity. Designers can provide it for eptive us of it. Of course, location housing often will determine the of outdoor space which, in turn, is o hard costs.

ing for older people should be in reas, close to facilities of all kinds viding easily accessible and regular transportation. In smaller towns, main an ideal location, as it is in large land costs permit. If on an out- g, transportation becomes more crit- overcoming isolation equally so. In 1 areas we might consider planning inction with large shopping centers jointly with other public and private s that bring the community to or : housing site. This might include : shops, garden club headquarters, social buildings, educational installa- other people-attracting developments, effect isolation and increase interest- e seen housing for retirees success- ned with gymnasiums for high school community centers jointly used by y students, and housing for the in the same site; some floors of ho- d office buildings in downtown areas uch combination contributing to op- es for the older person to be part- itive environment of all age groups. and not close any discussion of home accidents without reflecting the un- ie risk of injuries due to household . The report of the National Com- n Product Safety, as this organiza- ws, states that 20 million Americans ed each year in the home as a result ents connected with consumer prod- : the total, 110,000 are permanently and 30,000 are killed. The report

states that a majority of American homes contain potential fire hazards due to worn or defective wiring, overloaded circuits, or an absence of grounding. They further state that injuries result from dim lighting, uneven floors, irregular steps, slippery surfaces, obstacles, and steep inclines. From experience we know that stove design may cause or decrease burns; that unvented gas heaters are hazardous; and that unmarked and non-shatterproof glass on sliding doors can be very dangerous, particularly if sight is dim. Safety must be the first concern with design and equipment with proper engineering and product safety the determinants when selecting equipment for the elderly.

The National Safety Council is doing yec- man service and its efforts must be backed up by the housing designer by combining the prospect of not only a longer life but a safe and fulfilling one.

In conclusion, shelter often is the basis of man's emotional and psychological posture in society. To the degree that it is satisfying, he will in the older years often sacrifice other needs to sustain it. Dignity and self-esteem may be lost when the living environment is insensitive or substandard, rendering it damaging to the body, the psyche, or emotions, the sense of security and status. Proper design of the housing environment will minimize these physical and psychological components of living and also will reduce accidents and the serious disruption they cause by innumerable falls, broken bones, pain, incapacity, or death.

Life for most of us, regardless of income or age is a continuous, if often subconscious certainty that the beautiful images we gather on the way must, in the near future, become realities and transform our hum-drum existence. For some, thoughtful and safe retirement housing makes this dream, this human aspiration, this eternal hope come true, at least in the later years. What a worthy goal and, happily, an accomplishable one. Let's be about it.

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Respectfully,

Robert J. Marecek
Manager, Library

