is sent to you by your Ticonium Laboratory, doctor.

The magazine that covers the whole range of your interests — professional and personal.

PRESIDENT ALVIN L. MORRIS, D.D.S., Ph. D.

AMERICAN FUND FOR DENTAL EDUCATION
was so swamped with work that he was forced to take desperate measures.

One such measure was exactly what he was doing with my birches. He tied one end of a heavy rope to the fallen tree and yanked the tree up straight. It took only a few minutes so that in one day he could cover a lot of territory.

In some cases he used the old method of digging a trench to loosen the ball. The result was that of the trees that had received the rough treatment almost all survived. Of the others, which were carefully put in place by the digging method, a large number died, particularly the larger and older ones.

As he pointed out, it all made sense because the path of nourishment (although badly bent) was never cut. The passing years saw the three birches flourish—desperate measures.

Hiram was right.

One year after the hurricane, I was playing tennis with a friend when the club pro ran out to tell me that a patient of mine was in the clubhouse with a screaming child. I rushed back with him and recognized the young mother. The little girl who was about four years old had a swollen lip and a face covered with blood.

The mother apologized for tracking me down and admitted how frantic she was. The child had been jumping up and down in her mother's bed and tripped. Before she could catch herself she slammed hard against the bed post. The blow pushed both upper, deciduous first incisors back into the mouth.

Between her sobs and screams I could see that the child was in an edge-to-edge bite in the anterior region. The molars were out of occlusal contact; the child would be unable to eat.

I realized that something had to be done quickly. An orthodontic appliance was out of the question. So I told the mother that I would try to pull the two teeth back to the original position otherwise the child would not be able to chew with her back teeth.

I asked the mother to hold the child's arms and, with one quick movement, I pulled both teeth forward. The child let out a piercing scream. But I was satisfied because the teeth were now in good position.

When I saw the patient again, everything had satisfied because the teeth were in good position.

To seal the pits and fissures. Developed and tested under NIDR support, of the plastic binder called "BIS-GMA" (NIDR) at Bethesda, Maryland. NIDR is one of the National Institutes of Health, a component of the U.S. Department of Health, Education, and Welfare.

New insights and findings that the dentist can apply in his practice flow from the work of scientists at NIDR and of grant-supported investigators in dental schools and other institutions throughout the country. For example, the classical pulp studies conducted by NIDR have provided the guides which enable practitioners to use the high-speed drill with maximum efficiency and safety to tissue.

New Dental Materials

Dental materials form a major area of applied research. The most promising recent development is a plastic adhesive painted on chewing surfaces of the teeth, specifically the molars and bicuspids, to seal the pits and fissures. Developed and tested under NIDR grant support by Dr. Michael Buonocore at Eastman Dental Center, the sealant has kept children's teeth free of pit-and-fissure decay for two years. Because of these highly successful early results, NIDR has launched larger-scale field trials involving hundreds of human subjects. Such tests should also demonstrate whether dental hygienists or other auxiliaries can perform the procedures equally well and thereby free scarce professional manpower for more demanding tasks.

Because of the shortcomings of silicates and acrylics, dental scientists over the past 15 years have sought an improved filling for anterior teeth. The approach has been to mix together a suitable resin binder, an appropriate reinforcing filler, and other necessary ingredients so that the resulting composite would possess favorable physical properties. An important step forward in this field was the development, under NIDR support, of the plastic binder called "BIS-GMA" by Dr. Rafael L. Bowen at the Bureau of Standards. This binder serves not only as the basic ingredient of the highly
promising plastic sealant currently being tested against tooth decay, but also as the basis for most of the composite materials on the market today. The BIS-GMA formulations, however, had some shortcomings. These now appear to be largely overcome by a new formulation developed by Bowen. The glass particles in the filler are now radio opaque and are bonded to the plastic with a new coupling agent. The plastic itself, now made by combining three new monomers, is called Porasil, a promising plastic sealant currently being tested against tooth decay. The plastic itself, having been similarly demonstrated in laboratory experiments. Both the football-sized barnacle and the barnacle's apple were found to be in a very thin film, only about half as thick as the cellophane wrapping on a package of candy. Yet, it takes from 30 to 50 pounds of pressure to pull the barnacle loose from the surface to which it is attached.

For these studies, large numbers of barnacles have been raised in a laboratory aquarium filled with artificial sea water. Plying the barnacle shells open, scientists have removed the hidden cement glands and cementing and stomach cement substances. The composition of the proteinaceous cement is not yet entirely known. After chemical analysis, the next step will be to synthesize an artificial cement and test its safety and adhesiveness. The adhesive mechanisms of other marine animals, such as mussels, are also being investigated.

Development of an ideal adhesive would enlarge the dentist's scope of service and help him meet growing demands for dental care. It would greatly simplify repairs to a tooth when a dental auxiliary could be trained to fill a shallow cavity, thus releasing the dentist for more intricate problems.

Improving Restoratives

While the search goes on for new materials, dental science is also contributing to restoratives. One such effort seeks to lengthen the lifespan of amalgam fillings by altering the alloy's structure and composition. Generally, the composition of amalgam in BIS-supported research has been on studies of the different metallic phases which form during the final setting of amalgam restorations. The nature of these phases is believed to be of critical importance because they affect the mechanical properties of the final amalgam.

Recently, Dr. Lewis B. Johnson, Jr., of the University of Virginia reported that adding a little gold greatly improves the tensile strength and durability of ordinary amalgam fillings. The result of several years of metallurgical study, the new alloy is so promising that clinical trials are already being designed. According to laboratory tests, the new alloy is less likely to "creep" or flow under pressure. Dr. David B. Malaker at the University of Oregon recently showed that his perfected "creep" test is the best way presently known to predict the performance of amalgam. Usually, the less "creep" an amalgam shows, the more durable it is.

Another promising alloy devised at the Brooklyn Polytechnic Institute consists of gold reinforced with nickel fibers by means of a new process. In related studies at the University of Michigan, understanding of the distribution of biting forces within fillings has led to improved cavity preparation which will make restorations more comfortable and longer lasting. Also, at Indiana University, the value of liners has been demonstrated for protecting pulp against irritation from the acidic cements in current use.

Progress in Implant Materials

Under the NIDR-supported materials research program of the Dental Institute, scientists are also developing biologically acceptable implants to directly replace lost or missing teeth. In a promising experimental approach, Dr. Milton Hodosh of Brown University has extracted teeth from baboons, fabricated plastic replicas immediately, and inserted them into the sockets. The implants are so sturdy that baboons can chew on metal cages and not wear out the plastic tooth. Even with such abuse, some of these baboon teeth have now remained in place for nine years, and the gum tissue around the plastic teeth is as healthy as that around natural teeth. More recently, these plastic tooth replicas have been fabricated so that the tooth roots have microsporosis. The introduction of this property is said to greatly increase the stability of the implants in the baboons' jaws.

Ceramics and metal, such as titanium, offer other possibilities. Preliminary work at the University of Connecticut indicates that ceramics with defined porosities seem completely compatible with any tissue. New bone grows into the pores of these implant plants firmly. It is probable that ceramic implants might become important in the surgical treatment of mandibular defects, as well as for tooth implants.

Until these implants are out of the laboratory and ready for human use, the fixed bridge and the removable denture must continue in service. Therefore, an important area of research is how to make them more effective and less costly. Current studies include the development of new materials, improved design, and better methods of fabrication.
Nervous System

Anxiety or frustration states appear to be a definite occupational hazard among dentists, especially of the younger dentists. One is to lead to the surmise that the strain of developing a profession after trying to find a suitable location, the effort to maintain a time schedule in the office and a payment schedule in the bank, in addition to the mental frustrations of dental practice produces the stress phenomena which leads to the development of an anxiety or exhaustive state. 32

Occupational hazard among dentists, especially of the ice produces the stress phenomena which leads to the development of such stress conditions associated with the profession, these tensions can lead into another occupational hazard of dentistry as related to the parts of the body described prevention and treatment of these hazards. In summary, I have described the occupational hazards of dentistry as related to the parts of the body that they can affect. Whenever possible, I have described prevention and treatment of these hazards. It is vital that every dentist realize the inherent dangers of his profession and prepare to meet them competently when they arise, not only for his own safety, but also for the safety of his staff and patients. If the dentist can train himself to be health and safety minded then he can expect a long and productive practice.

FOOTNOTES

2 Ibid., p. 66.
3 Ibid.
4 Ibid.
5 Ibid., p. 69.
6 Ibid.
7 Ibid.
8 Ibid., p. 70.
9 Ibid., p. 71.
10 Ibid.
11 Ibid., p. 74.
13 Ibid.
14 Ibid., p. 96.
19 Bahn, op. cit., p. 12.
20 Ibid., p. 13.
21 Kramer, op. cit., p. 48.
23 Fedorin, op. cit., p. 27.
25 Kramer, op. cit., p. 49.
27 Fedorin, op. cit., p. 78.
28 Ibid., p. 79.
30 Ibid.

SELECTED BIBLIOGRAPHY

port that the considerable amount of blood lost after multiple extractions can be reduced when Neosynephrine, which shrinks blood vessels, is used. Also, the patients in the study recovered more quickly with fewer complications when part of their normal daily fluid requirement was administered by injection into the veins the day after surgery. Because it is hard for patients with sore mouths to drink enough liquid at the time when it is most needed, intravenous feeding is most beneficial.

Preventive Dentistry

Other advances in therapy relate to prevention. A major contribution of dental scientists in the past few years has been the growing recognition of the role of bacterial plaque in dental infections. As a result, the dentist has scientific rather than empiric evidence to urge his patients to follow an oral hygiene regimen, including not only brushing but also flossing as well as any other necessary measures to remove interden­
tal and gingival bacterial deposits. The dentist now knows, in trying to curb the ravages of caries or peri­
tal and gingival bacterial deposits. The dentist now

activities conducted and supported by NIDR that re­late to the daily work of the dental practitioner. It should be recognized, however, that these contribu­
tions are undergirded by basic research. As new in­sights and understanding emerge from basic research, they will lead to even greater improvement in therapy and control and eventually to the prevention of oral diseases, the ultimate goal of dentistry.

HazardS (Continued from Page 7)

The biological effects of excessive radiation are

More specific changes seen are:

(2) dermatitis; (3) true carcinogenic effects

The patient should take at least three weeks rest

Frequent changes of position are essential to stimu­
late circulation, prevent weakening of ligaments, and

imbalance in opposing muscles.30

The dentist shouldn't rely only on exercises to

maintain his health, but also make use of human engi­
neering in regards to techniques, instrumentation, lay­
out of instruments, and the use of dental assistants.

In this aspect, the dental stool can be regarded as a

positive factor in reducing fatigue, stress, and strain.

Results of a survey sent to members of the Mary­
land State Dental Association in regards to the use of

the dental stool yielded an enthusiastic response in

favor of the stool. In many instances, the dentists

used the stool to alleviate symptoms of diseases con­
tracted while standing or before entering their careers.

Many men stated that they felt generally less tired at

the end of the day; had lengthened their number of

productive hours; reduced back strain and discomfort

to legs and feet; and increased the output of work

once the adjustment to the stool was made.29

Many of the dentists questioned in the survey felt it

to be a necessity to learn the habit of sitting early
to facilitate ready adaption later. In regards to this

commend the dental schools can play an important

role by having the students use the stool in their clin­
ical experiences. Also, courses in body mechanics and

fitness should be given. These will help the dentist

assume a good posture and teach him how to develop

endurance, both general and local (in fingers, hands, and

arms), and to retain mobility in all the articula­
tions of his body.

A well-facted panel from a six-month exposure to the Florida marine environment showing ocean barnacles destroying the protective coatings by projecting the growing shell edge through the various paint layers and leaving the still body played-out and fading point which adheres to the shell sides.
to as "quite severe." This has also hurt efforts to develop improved methods of dental education and dental care.

Two dental schools have closed recently: St. Louis University in 1970 and Loyola of New Orleans this past year. Without the needed financial support, other schools may be forced into this lamentable position. These are some of the challenges facing the American Fund for Dental Education.

Most Promising Source of Private Aid

Now, as never before, dental schools and their students look to AFDE as one of their most promising sources of private aid. In turn AFDE depends on many sources, including the dental profession and dental industry, to help meet its commitments to dental education and dental care.

In 1970, for example, when contribution income increased 12.9%, the bulk of this support was drawn from the following five sources: the American Dental Trade Association and its member companies, $177,188 or 24.3% of total contributions; trusts and foundations, $143,425 (19.6%); dentists and auxiliaries, $125,669 (17.2%); the American Dental Association, $101,915 (15.2%); and non-dental business and industry, $108,875 (14.9%). Income for the year totaled $729,261 compared to $645,923 in 1969.

Another substantial increase in contribution income is hoped for this year from the above and other sources, as AFDE continues to intensify its efforts to help meet the increasingly urgent needs of dental students and their schools.

AFDE President Alvin L. Morris, D.D.S., Ph.D.

A native of Detroit, Michigan, Dr. Alvin L. Morris, has served as president of the American Fund for Dental Education since 1970. He received his D.D.S. degree in 1951 from the University of Michigan School of Dentistry, where he was awarded the Alpha Omega Award for the highest scholastic standing of his class. At Michigan he was also elected to Phi Kappa Phi Honor Society.

After a tour of duty with the U.S. Army Dental Corps, Dr. Morris was awarded a postdoctorate research fellowship by the National Institute of Dental Research, U.S. Public Health Service. With his fellowship he enrolled in the University of Rochester School of Medicine and Dentistry. While a student there he also served as an instructor in anatomy and physiology. He received a Ph.D. degree in experimental pathology in 1957.

On graduation he continued his academic career at the University of Pennsylvania, where he served as Assistant and then Associate Professor of Oral Medicine and later head of the Department of Oral Diagnosis in the School of Dentistry.

His career at the University of Kentucky began in 1961 with appointments as Professor of Oral Diagnosis and Oral Medicine and Dean of the new College of Dentistry. In 1968 he was appointed Associate Director of the U. of Kentucky Research Foundation and Assistant Vice President for the Medical Center. A year later he was made Special Assistant to the President, and last year he was appointed Vice President for Administration.

A Fellow of both the International and American College of Dentists, Dr. Morris has served as consultant in dental education for many national organizations as well as the federal government. Since 1988 he has served on the National Advisory Council on Education for the Health Professions. This year he was elected to membership in the Institute of Medicine of the National Academy of Sciences.

Author and co-author of many books and articles on dentistry and dental education, Dr. Morris recently contributed a major article to the Journal of the American Dental Association, titled, "Year 2000, Dental Education."

OCCUPATIONAL HAZARDS OF DENTISTRY

by John P. Virgilio
School of Dentistry of the University of Maryland Class of '71

Dentists, as a group, are self-employed and are dependent upon the amount of work they do for their income and support, care, and education of their families. When they are absent from the office for any reason whatsoever, their incomes stop while expenses continue. Often the continued absence of the dentist from the office may cause the patients to seek treatment elsewhere, resulting in a permanent loss of patients. The dentist who is entirely dependent upon himself for his income, cannot afford to be in poor health which might necessitate not only his absence from the office but make it impossible for him to continue his optimum work load.

During the course of a normal day's work, the dentist is exposed to many hazards that affect his state of health. Most of these hazards can be grouped according to the parts or regions of the body which are affected such as the following: hands, eyes, ears, feet, body posture, and the internal organs including the nervous system.

The Hands

Dermatoses are a common discomfort and embarrassment for the dentist due to his contact with potent allergens and to exposure to infectious diseases. Dermatoses may be classified into two main groups: contact dermatoses and infectious dermatoses.

Contact dermatitis is the most important of the dermatoses and is caused by direct contact with allergens and chemical irritants. Primary irritant dermatitis is the irritation of the skin by substances contacted topically, such as soaps, acids, and caustics. These substances alter the skin's natural resistance to irritation and infection, remove the normal oils of the skin, change the pH of the skin, and damage the horny layer of the skin.

Primary irritant dermatitis is prevented merely to rinse his hands, as this is highly effective in removing bacteria and soil. Drying should be done with soft towels and by patting rather than by rubbing. Oils and hand cream should be used as frequently as possible without it impairing the ability to hold instruments securely.

Allergic contact dermatitis results when the dentist becomes allergic to materials that he uses in his everyday practice. The development of sensitization may require many years of constant exposure. Usually, the only cure in this case is complete avoidance of these allergens which may be impossible for the practicing dentist. Therefore, it is important to understand the factors relating to the development and prevention of allergic dermatitis.

Chemicals such as anesthetics, x-ray processing agents, antibiotics, and organic compounds like petroleum have great potential sensitizing ability. Frequent washing leaves the normal protective barrier of the skin impaired and allows penetration of potential allergens.

Cross reactivity may also occur. If a person is allergic by contact to a certain class of substances, he may also react to substances with a similar molecular structure. The term "sensitizer" is applied to the antigen producing the reaction primarily; "elicitors" are those drugs or chemicals with chemical structures similar to the structure of the antigen to which the patient has been primarily sensitized that contact causes an allergic reaction. Many times the dentist unwittingly exposes himself to the possibility of sensitization, and the indiscriminate use of the following materials should be avoided:

- mercurial antiseptics
- solutions containing aniline dyes, sulfonamides, and penicillins
- solutions containing chromium acids, and penicillin G
- solutions containing sodium salts, nickel salts, formaldehyde, and "raw" plasticizers

TIC is grateful to the editor of Dental Student for permission to reprint this definitive article.
ers; (4) defatting and desiccating agents such as plaster, soap, and organic solvents.

Infectious dermatoses are the result of exposure to microorganisms and can be divided into the following categories: acanthosis, infections, eczematous dermatis, yeast infections, and fungous infections.

Acute cellulitis results when the dentist's hands are exposed to microorganisms. The cardinal signs are localized redness, swelling, tenderness, and lymphatic infection.

Acute cellulitis may occur.

The nail can act as a reservoir for repeated yeast infections result when the hands are contaminated and immersed in soapy water or other macerating agents and then exposed to yeast in the patient's mouth. There are two types of yeast infections.

In the first type, which is associated with the webbing of the fingers, the web is red, moist, and fissured. In the second type, which is associated with the webs of the fingers, the web is red, moist, and fissured.

The ninth step is an important one for the dentist to keep in mind, since a puncture wound made by a dental bur contaminated with bacteria may cause tenosynovitis. Tenosynovitis is an infection of the sheath or of the tendon itself. A few hours after the infection is severe, the patient should not go to work.

The Eyes

Injury to a dentist's eyes results in the loss of a professional career. A dentist must have acute vision and be able to use his eyes for long periods without fatigue.

I n its brief 15-year history the American Fund for Dental Education has established itself as the single most important national agency for the collection and distribution of voluntary contributions in support of dental education. As a recent editorial in the Journal of the American Dental Association put it: "The AFDE is still an infant. According to human standards it is now leaving kindergarten to enter first grade. But what an infant! Since 1955 it has opened its hand to the receipt of over $5 million. Now, 5 million bucks is a lot of money. Not nearly enough, but a lot of money. The list of contributors from the industrial community is longer than your garden hose. The American Dental Trade Association alone contributed almost 2 million of those dollars, and other industrial components contributed almost an additional million."

Of the more than $5 million raised so far AFDE has allocated nearly $2 million to grants for dental education. This includes direct financial grants, student loan funds, and grants for research projects and workshops to develop better methods of dental education and dental care. Grant money has also been made to support the ongoing programs of the American Association of Dental Schools. To date AFDE has awarded or sponsored 104 teacher training fellowships, 101 dental scholarships for disadvantaged minority students, 151 dental assistant scholarships, 59 dental hygienist scholarships, and 166 dental laboratory technology scholarships at a cost of over $1 million.

Needs Continue to Increase

AFDE President Alvin L. Morris, D.D.S., Ph.D., Vice President for Administration, University of Kentucky, declared recently: "Both dental education and dental care have reached a critical point. Demands for dental assistance are increasing, but the ability of the dental profession to meet these needs is not keeping pace with demands. The solution is to provide the manpower needed, and the source of this manpower is dental education."

American Fund for Dental Education

"Dental schools are doing their best to meet these needs but many are hamstrung because of lack of funds. Fourteen dental schools at this moment are in a serious financial position. This is a significant time for AFDE to redouble its efforts to help meet these needs. It is more important than ever before that we do an increasingly effective job on behalf of dental schools and their students. AFDE has an extremely important role to play at this exciting point in the profession's history."
the alarm systems which flash warning lights or ring bells in police precinct offices, or the constant round-the-clock protection of security patrols who check professional offices. Such persistence a thief is afraid to gamble with a break-in.

- DON'T ADVERTISE YOUR ABSENCE! . . . one dentist was enraged at his receptionist when he took vacation time, and told her to start her the following day, and she pinned a notice on the front door saying, "Dr. Blinn will be away on vacation until August 1st." A break-in occurred the day after she left.

Another dentist asked for trouble and got it, two-fold, when he allowed a ship's photographer to take a picture of him and his wife at a bon voyage party before departing on a summer vacation cruise. The photo and caption made the local social news in the town paper. Not only was the dentist's office robbed, but his home was cleaned out of valuables and heirlooms as well. Later that day, a near neighbor that many burglars scan newspapers daily to see which dentists and other professionals take off on vacations and conventions. They then place an office call to see if any of the staff are on duty and break in when there's no answer.

Other thieves conveniently call one dental office after another, hoping for a response from an answering service which may politely tell them that an office is closed for a few days while "Doctor is on vacation" or otherwise out of town.

Be very discreet and protective about office absences and instruct personnel exactly how to handle calls and inquiries when you are not present.

- MAINTAIN A PROTECTIVE ALERT AGAINST BURGLARY . . . do this by hiding valuables when you lock up for the night or go to a convention.

Invest in an etching service in which expensive equipment, especially the portable type, is professionally etched with your name and address and an identification number, a copy of which you can mail to your police department. Electric etching tools are the latest weapon to discourage burglars who don't want identifiable goods which are almost impossible to fence or sell.

Change locks on your doors and secure windows if a nearby colleague has been robbed. You may be the next victim and your office may have been "measured" by the burglar for his next break-in. He'll leave you alone, however, if he observes evidence of detecting devices on the premises.

Always advise the police when you see evidence of attempted break in. Remember a professional burglar doesn't give up. He is in business to rob you, and he'll do it often if you let him!

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A dentist who has severe eyestrain, impaired visual acuity, traumatic ocular injury, glaucoma, or stereoscopic inadequacy cannot accurately make routine clinical observations in the office, decreased productivity, wasted motion, accidental injury, headache, physical fatigue and psychological damage due to constant frustration are the consequences of defective sight.

Eye injury can occur from routine operative procedures. High speed drills with water spray and ultrasonic instruments result in bacteria laden water, medicaments and debris thrown into the operator's face. High speed reduction with carbide burs is a milling action. At 100,000 to 200,000 r.p.m. the milled chips fly out of the mouth at the rate of 31 feet per second. Tooth fragments, calculus, filling materials or bone spiculae can become high speed missiles to injure the eyes or break regular glasses. The fragments from a broken lens can cause greater injury than the missile itself. Therefore, every dentist should wear shatterproof eyeglasses while operating.

Infections can be carried into the eyes by dirty hands. A dentist should avoid touching his eyes after handling money, turning door knobs, working in the mouth, or handling a patient's dentures. Droplets resulting from coughing, expectoration, sneezing or colds result in the inflammation of eyes when these droplets are transferred from the patient to the dentist.

Eye emergencies are best dealt with by having a preconceived plan ready to follow in the event of an injury to the eyes. Chemical burns should be flushed immediately with tap water for a minimum of five minutes. Superficial foreign bodies can be removed by irrigation or by delicate manipulation with a moistened sterile cotton swab. A local anesthetic and cortisone-antibiotic solution applied immediately after irrtigation will relieve pain temporarily. Lid and globe lacerations produced by flying debris may produce severe bleeding. When this happens, both eyes should be covered by a thick bandage to keep them at rest and control bleeding.

From the above considerations it is evident that protection to the eyesight is essential to a successful lifelong dental practice. The requirements of a good vision suggest that: (1) a yearly ophthalmologic examination is necessary; (2) office lighting should be improved; (3) glare sources should be eliminated; (4) shatterproof prescription safety glasses should be worn while working; and (5) office color schemes of non-glossy blues or greens can reduce visual fatigue.

A high speed instrument emits a high pitched whine which may cause a lesion of the hearing apparatus known as acoustic trauma. This may become chronic or acute. Auditory lesions may remain undetected for years, since an individual may experience 25% loss of hearing (30 decibels) before becoming aware of a problem in oral communication.

The individual response to this auditory risk depends on many variables such as personal susceptibility, time exposure, type of equipment (wear bearings increase noise level), whether the walls reflect or absorb noise, and if more than one high speed drill is used at the same time in the same room. The dentist should try to vary the operations so the trauma is short lived and use custom made ear plugs. Also, the operator walls and ceiling should be made of sound absorbing materials.

Internal Organs

By the very nature of his work, the dentist finds himself in a highly pathogenic area, an excellent medium for the cultivation of many organisms. In working at close proximity to a patient, he makes himself more susceptible to certain conditions of infection.

Venereal disease is the number one communicable disease in the United States (3,000 cases a day). Exogenous syphilis is an occupational hazard for dentists. If a dentist has a cut or open wound, syphilis can be contracted. The dentist should adopt a high suspicion index to protect himself and his patients when encountering a questionable case. The dentist shouldn't discount a patient on the basis of the patient's socioeconomic background thinking that the patient is not the type.

If the patient is a known syphilitic, the dentist should coat the hands with twenty per cent calomel ointment and wear rubber gloves while working. The water and air spray emitted from the head of a high speed instrument can be contaminated by organisms in the patient's mouth. The resulting aerosol can act as a pathway for the spread of respiratory infections from the patient to the dentist by carrying the common cold or influenza virus into the surrounding air.

The Ears

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High speed equipment requires continuous lubrica-

(Continued on Page 13)
When Dr. Kenneth Adams opened his office earlier this year, he held a party in his suite and was quite proud to show colleagues and friends how he had removed every­thing but a great many break-ins never reach the eyes and ears of the police.

In Sacramento, where burglaries are rising at the rate of 17 to 22 per cent each year, 3,287 of the 5,537 burglaries in 1970 involved homes and the remainder were office thefts and other small-business involve­ments.

What should alert dentists to the fact that trouble lies ahead for many practitioners is that in cities like Sacramento, and others of varying size, dental offices break-ins now occur with daily regularity in nearly every municipality of almost a million population or larger.

In a recent study, Crime Against Small Business, the Small Business Administration warned that of the thes $3 billion crime loss, burglary accounted for $958,000,000, and involved businessmen whose in­comes grossed well under a million dollars annually. Such business men, and dentists are in this category, suffered 68 percent of the financial loss due to bur­glary.

Frequently, dentists are astute and can sense trouble as did one dentist in a midwestern city when a new patient entered his office requesting dental pro­phyllaxis, stressing he wanted to be rid of tarter. It was obvious to this dentist that the patient had been subjected to a professional teeth-cleaning just a day or two before. He sensed the man's motive and before dawn a prowler actually caught the patient attempting a break-in.

The modus operandi of the burglar was really sim­ple. He went from dentist to dentist in order to survey the office suite and plan a robbery. He called himself the accomplished thief cannot cut wires or unscrew light bulbs or remove fluorescent tubes.

Do you know that an army of burglars are at large whose main occupation is sizing up professional offices for lucrative theft? Last year, according to FBI re­ports, burglaries occurred at the rate of two a min­ute—more than a million for the year!

Take a typical middle-sized city like Sacramento, capital of the State of California, whose metropolitan population of approximately 700,000 persons is served by more than 300 dentists. Although this city has an adequate and excellent police force, there's a burglary every 20 minutes. These are reportable bur­glaries, but a great many break-ins never reach the ears of the police.

Burglars who find the front door a challenge, usu­ally try a rear or side entry, or a window. Did you know that most dental offices have such weakly pro­tected sections on the side of the office a hundred percent more invulnerable against burglary than before, and it won't cost you a penny! Or you can invest your money wisely for a variety of protection systems which work.

Here are the pointers which help render a burglar helpless against break-in when it comes to your per­ticular office:

1. GIVE YOUR OFFICE A SECURITY CHECK TODAY! . . . . .tomorrow may be too late if a bur­glar has you set up for a break-in. How are your door locks? Most thieves can pick front door locks of dental offices with a wallet-sized plastic card, such as a credit card. A small scissors cuts the key picking pattern in moments for the enterprising thief and he is in. Worse yet, you won't collect from such a robbery because insurance claims are based on forcible entry only, and picking a lock is anything but forcible! Spring locks are the most vulnerable. Security men suggest the use of pin-tumbler cylinder locks with a minimum of five pins. Hardware stores carry a variety. A thief encountering such a lock knows he spends an hour or so trying to open it. He can't afford that risk! Consider as well, the new magnetic locks. They work.

2. SPEND FOR LIGHTING AND SAVE! . . . . . is a sound economic fact. Constant outdoor and indoor lighting while the office is vac­ant is money in the bank, because next to full security, the accomplished thief cannot cut wires or unscrew light bulbs or remove fluorescent tubes.

3. CREATE YOUR OWN BOOBY TRAPS! . . . . . dentists, after an expensive robbery, pur­chased a specially built welcome mat consisting of an electronic sensor. He actually had two, one at the out­side of his entry, and the other imbedded in carpeting leading to his receptionist's desk. They were equipped with sensors which flashed an alert to a security patrol company nearby. Anyone stepping on such pads after office hours would be immediately under surveillance or apprehended, depending upon which mat was touched.

Another dentist after reading an advertisement by a nationally known merchandiser with chain stores throughout the country, spent two dollars per door and window for sensors which went off with a loud screech, heard a block away, and thus had ample burglary protection for less than twenty dollars for his entire office. Such noise alarms are battery-powered but can be hooked to an electrical system. Many hardware stores sell complete burglar systems with professional installation for under $300. These are noise alarms which respond to the trying of a door or window, locks, and even attempted break-ins through walls. They are extremely sensitized to vib­rations. Burglars detect noise alarms, and the same alarm can also be adapted to throw flood lighting throughout the interior and exterior of the office as they go off.

You might also consider photo-electric cells or sensors which will trigger an alarm when a light beam is interrupted, as well as a number of other new bur­glar traps now on the market.

Among the most expensive of burglar-catchers are the accomplished thief cannot cut wires or unscrew light bulbs or remove fluorescent tubes.