Compendium Bibliography

The initial twenty Schick Shadel publications appeared between 1940 and 1948. They subsequently were collected and republished in a 1948 book, *Alcoholism: Collected Papers of the Schick Sanitarium.* The 20 papers are summarized below as an annotated bibliography.

1. **Voegtlin, W.L. (1940). The treatment of alcoholism by establishing a conditioned reflex. American Journal of Medical Science, 199, 802-810.**
    a. Provides a brief overview of the results of a treatment for alcoholism based on the principle of the conditioned reflex. The proper procedure is outlined with attention paid to setting the scene and appropriate use of medications. Results of 538 (of the original 685) patients treated over 4 years are presented, and it is noted that younger people and women were less successful than older men. At four years post treatment, 64.3% of patients remained abstinent. Finally, it is noted that the use of routine reinforcement and psychotherapy may help to improve abstinence rates.

2. **Lemere, F., & Voegtlin. W.L. (1940). Conditioned reflex therapy of alcoholic addiction: Specificity of conditioning against chronic alcoholism. California and Western Medicine, 53, 1-4.**
    a. Provides a review of the Voegtlin (1940) manuscript, noting the 64.3% total abstinence rate for patients at 4 year follow up. Two case samples are provided, highlighting the importance of conditioning against all forms of alcohol (wine, beer, and distilled liquors), as relapse to previously unused (and therefore unconditioned) types of alcohol occurred in both cases. Also, the authors raise the question if, in a very small minority of treated patients, psychosis or other symptoms of severe psychopathology may be triggered as a result of removing the (albeit maladaptive) coping functions of alcohol.

3. **Voegtlin, W.L., Lemere, F., & Broz, W.R. (1940). Conditioned reflex therapy of alcoholic addiction. III. An evaluation of present results in the light of previous experiences with this method. Quarterly Journal of Studies on Alcohol, 1, 501-516.**
    a. It is noted that the earliest scientific attempt to treat alcoholism by a conditioning procedure was that of Kantorovich (1930). The literature involving previous uses of conditioning procedures is reviewed, and the authors highlight the choices of the unconditioned nauseant stimulus, the importance of the environment of the conditioning procedure (e.g., olfactory, visual, auditory), and the specificity of the conditioned stimulus. Further, it is noted that reinforcement of the conditioned reflex through systematic follow-up treatment is necessary to increase the likelihood of

success in treatment. The abstinence outcome data of over 64% for the 685 patients treated at Schick Shadel Hospital are presented, with discussion of the difficulty in accurately predicting success based on certain personality traits. Importantly, the authors note that, among the patients who relapsed after treatment, a rapid tendency to spontaneous extinction occurred. This observation has led to a decision not to accept patients for treatment if more than one relapse has occurred.

4. **Voegtlin, W.L., Lemere, W., Broz, W.R., & O'Hollaren, P. (1941). Conditioned reflex therapy of chronic alcoholism. IV. A preliminary report on the value of reinforcement. <u>Quarterly Journal of Studies on Alcohol, 2</u>, 505-511.**
    a. Details the need for, and results of, a year-long program of periodic reinforcement of the original conditioned reflex. Study examined the effects of periodic reinforcement as related to two variables: 1) the patient's initial attitude toward the need for periodic reinforcement, and 2) the number of reinforcement treatment séances received. Based on an examination of these two variables across 285 participants, the authors conclude: 1) those participants who received one or more reinforcement treatments were more successful in their abstinence at a four year marker, and furthermore that the greater the number of reinforcement treatments was related to greater abstinence, and 2) participant attitudes toward the need for reinforcement treatments was predictive of abstinence at the four year marker, with 90% of patients who initially accepted the reinforcement program remaining abstinent, whereas 71.2% of the patients who initially refused the reinforcement program remained abstinent. The authors also examined these findings in light of abstinence rates of previous studies, and suggest that it "would appear reasonable to postulate total abstinence for at least one year in approximately 85% of the patients who accept and cooperate with the reinforcement program." (Page 41).

5. **Lemere, F., Voegtlin, W.L., Broz, W.R., & O'Hollaren, P. (1942). Conditioned reflex treatment of chronic alcoholism. V. Type of patient suitable for this treatment. <u>Northwest Medicine, Seattle, 41</u>, 88.**
    a. Examines the type of patients most suitable for, and therefore presumably most responsive to, conditioned reflex therapy. Authors conclude that, "the type of patient best suited for the conditioned reflex treatment of chronic alcoholism is the essentially normal, stable person who has gradually developed the habit until it has gotten the best of him, and now he want help in breaking this habit and is willing and anxious to stop drinking for good." The authors provide a list indicating which patients are "poor candidates" for the treatment, including: the financially indigent (extremely low socioeconomic status), the uncooperative patient (treatment-mandated), the constitutional psychopath (antisocial personality

disorder), the inadequate (dependent personality features), the psychotic, the deteriorated patient (chronic alcoholics), and women. The authors provide rationale for each of these treatment contraindications.

6. **Voegtlin, W.L., Lemere, F., Broz W.R., & O'Hollaren, P. (1942). Conditioned reflex therapy of alcohol addiction. V. Follow up report of 1042 cases. American Journal of Medical Sciences, 203, 525-528.**
   a. Provides an overview of 1,042 cases over an observation period of 5.5 years for the purpose of determining overall abstinence rates for patients treated with the conditioned reflex therapy. The authors discuss rates of abstinence and relapse in 6 month periods, indicating percentages for patients remaining abstinent for those time periods. "The term 'abstinence' as used in the presentation of these data indicates that the patient has refrained completely from an alcoholic inhibitor of any kind or amount from the time of treatment to the present. The term 'relapse' indicates that the patient had indulged in alcoholic drink to some degree even though his relapse was not followed by return to a habitual type of drinking in all cases. In a few cases patients attempted to drink out of curiosity and were prevented because of the conditioned reflex that had been established, and who have remained abstintent since, are classified as abstinent." (Page 48). Of the total series, 58.6% of the cases were abstinent and 41.1% had relapsed. Overall, the authors found that, in 142 patients who had been observed for more than four years, 44.7% had remained abstinent.

7. **Lemere, F., Voegtlin, W.L., Broz, W.R., O'Hollaren, P., & Tupper, W.E. (1942). The conditioned reflex treatment of chronic alcoholism VIII. A review of six years' experience with this treatment of 1,526 patients. Journal of American Medical Association, 120, 269-270.**
   a. Outlines the etiology of alcoholism; authors assume the position that rather than a moral failing, "Excessive drinking is a disease in that the patient has an abnormal reaction to alcohol not shared by the normal drinker." (Page 51). Authors speculate that this predisposition is genetically based due to the investigation of family backgrounds of their patients. Authors continue by providing a brief overview of the method of conditioned reflex treatment of alcoholism. Authors then summarize follow up reports on 1,526 patients who have been treated with this procedure. Of note, 644 patients who were treated within the last two years reported abstinence rates of 74.8%, and 291 patients treated from two to four years ago reported abstinence rates at 52.5%. Authors comment on the advantages of the treatment, specifically focusing on its short duration and wide applicability, as well as its ready acceptance by the motivated patient. The authors conclude with the contention that this is the "best available treatment for alcoholism."

8. **Lemere, F., Voegtlin, W.L., Broz, W.R., O'Hollaren, P., & Tupper, W.E. (1943). Heredity as an etiologic factor in chronic alcoholism. Northwest Medicine, Seattle, 42, 110.**
   a. Provides support for the authors assertion of the specific inheritance of alcoholism. An operational definition of alcoholism as "drinking serious enough to have become a problem to the patient, his relatives or his associates." (Page 56). The distribution of alcoholism rates across the family histories of 500 patients is provided in table form, and the interpretation of the data suggests that "inheritance is usually through the father or the mother's male relatives." (Page 58). Also discussed in this article are the points that susceptibility to alcohol is similar to an allergic reaction, that the effects of the drug experienced by the alcoholic are more rewarding than those experienced by "the normal drinker," and that conditioned reflex therapy is a logical treatment in that it deprives the excessive drinker of the rewards and pleasures of alcohol that they would otherwise experience.

9. **Lemere, F., Voegtlin, W.L., Broz, W.R., O'Hollaren, P., & Tupper, W.E. (1942). Conditioned reflex treatment of chronic alcoholism: VII Technic. Diseases of Nervous System, 3, 1-4.**
   a. Begins by reporting that the primary objective of the conditioned reflex treatment of chronic alcoholism is to "develop a physical aversion to the sight, taste, smell, and thought of liquor at the conditioned reflex level." (Page 59). The authors then provide a comprehensive and detailed exposition of the entire "Technic," or *method*, of the conditioned reflex treatment of chronic alcoholism. Included in the exposition is a specific description of the setting, materials, and procedures of treatment including modifications for treatment resistant patients (e.g., those for whom emesis is either facile or difficult). Additionally, the authors include indications and contraindications for the treatment as well as a brief summary of the results they had obtained to date (with abstinence rates ranging from 46.1% to 66.7%). The authors then answer frequently asked questions about drinking and this treatment specifically, including: how treatment-induced vomiting is different from *natural* drinking-induced vomiting, the choice of emetine rather than apomorphine, underlying neurosis which may emerge in the absence of drinking, etc. Lastly, in addenda, the authors note a change in procedure of the administration of emetine as a result of feedback from patients.

10. **Voegtlin, W.L., & Lemere, F. (1942). The treatment of alcohol addiction. A review of literature. Quarterly Journal of Studies on Alcohol, 2, 716-803.**
   a. Provides a comprehensive review of the literature as it relates to the treatment of alcohol addiction. The authors present the rationale of the selection of papers for inclusion in the review, which largely consisted of

those coming from an "authoritative source" and/or were data driven. The review includes selected papers from the following areas: Psychological Methods (including compulsory and punitive measures, psychosocial therapy, religious conversion, institutionalization, outpatient treatment, psychoanalysis, hypnosis); Physiological Methods (including conditioned reflex therapy, elevation of blood sugar levels, measures directed toward the reduction of intracranial pressure, convulsive therapy, sero- and autohemotherapy); and Pharmacological Methods (including benzodrine sulfate therapy, vitamin therapy, atropine and/or strychnine therapy, emetine therapy, apomorphine therapy, rossium therapy, sedative medication, colloidal preparations of gold salts); as well as other miscellaneous methods. In summary, the authors provide two general impressions. The first impression underscores the "apparent reticence" with which English-speaking psychiatrists presented their findings of the relative efficacy of the various treatments examined. As such, the authors suggest that "conventional psychotherapy yields rather disappointing results considering the time and expense involved." (Page 141). The second impression addresses the divergent opinions within the research literature as to what constitutes "improved" (i.e., abstinence versus controlled versus pathological drinking). Lastly, the authors revisit the strengths and weaknesses as well as the efficacy of some of the more noteworthy treatment approaches.

11. **Voegtlin, W.L., O'Hollaren, P., & O'Hollaren, N. (1943). The glucose tolerance of alcohol addicts. A study of 303 cases. Quarterly Journal of Studies on Alcohol, 4, 163-182.**
    a. The authors state that, as they had access to a large number of appropriate patients, it was worthwhile to study glucose tolerance in order to determine if "alcohol addicts as a class are characterized by a derangement of the carbohydrate metabolism as measured by the glucose tolerance test." (Page 151). They note that their primary interest in conducting this study was to demonstrate the presence or absence of the hypoglycemic state. A total of 303 patients (272 males and 31 females) participated in this study. The glucose tolerance tests were normal in 136 of the patients (44.5%); abnormally high in 125 of the patients (41.2%); and abnormally low in 19 of the patients (6.3%). Additionally, 26 patients (8.6%) showed characteristics of both hyper- and hypoglycemia in the same curve. The authors provide, solely on theoretical grounds, explanations for the findings of this study, that the carbohydrate metabolism of the patients was "seriously deranged in more than half of a series of 303 patients." (Page 165). It was noted that further studies of the correlation of repeated glucose tolerance curves with liver function and other tests.

12. **Shadel, C.A. (1944). Aversion treatment of alcohol addiction. <u>Quarterly Journal of Studies on Alcohol, 5,</u> 216-228.**
    a. Written by Charles Shadel in 1944, this report begins by detailing the statistical follow-up data of 1,194 patients in 1942. It is noted that, due to the war, it would likely be difficult (or impossible) to complete similar studies during that time. The author notes that the non-medical aspects of the aversion treatment of alcohol addiction have never been documented; thus, the purpose of this manuscript was to provide such detail. All procedures, the author notes, are modified based upon the unique personality of each patient. The procedures develop through three stages: 1) preliminary interviews, 2) institutional care, and 3) one year follow-up. Each of the three stages of the treatment is outlined in considerable detail. At the beginning of treatment, patients may be given "an odd drink or two" if it appeared that they "were in need of it." However, aversion treatment was not initiated until patients were free from alcohol and "mentally clear." The author notes that "in patients who are frankly psychotic we have been unable to create an aversion" (Page 171). Group therapy was a part of the institutional care stage, and patients who have traveled back for "recaps" were involved in the group process, as well. Group lectures were provided on a weekly basis by staff physicians for a didactic component of the process. During this lecture, patients are asked to remember three things: 1) abstinence must be permanent, 2) abstinence must be total, and 3) before taking a drink, the patients should remember to stop and think over the consequences of taking the drink. The follow-up stage of treatment lasts for one year; it is noted that former patients have come to call the follow-up booster sessions "recaps." The staff involved in the follow-up process was made up of former patients, which the author emphasizes as being of critical importance. Upon discharge, each patient was provided with a leaflet which reminded the patient of the following:
        i. Never take that first drink.
        ii. Do not experiment with drinking.
        iii. Remember that alcoholism is an illness.
        iv. Do not look on alcoholism as a personal weakness.
        v. Do not think of alcohol as a challenge.
        vi. Prove that you do not need alcohol.
        vii. Develop other outlets.
        viii. Do not work too hard.
        ix. Develop an adequate philosophy of life.
        x. Be proud of having stopped drinking.

13. **O'Hollaren, P. (1947). Pentothal interview in the treatment of chronic alcoholism. <u>California Medicine, 67</u>, 382-385.**
    a. Provides description of the use of sodium pentothal in the treatment of alcoholism by the author in 1941. It is noted that the use of pentothal interview in the treatment of chronic alcoholism at Shadel was used as an

adjunctive treatment and part of a comprehensive treatment program. In this report, 35 patients were treated over a period of five years. These 35 patients were chosen from approximately 4,000 patients with chronic alcoholism "because they were the most difficult type and previously would have been regarded as practically hopeless." (Pages 182-3). The author concludes that the use of the pentothal interview is useful as an aid to diagnosis and treatment, including hypnotic suggestion, re-education, and narcosynthesis. It is also useful in gathering a more thorough psychiatric history from patients who might otherwise be reluctant or resistant to full disclosure of their psychosocial status.

14. Voegtlin, W.L. (1947). Conditioned reflex therapy of chronic alcoholism: Ten years' experience with the method. Rocky Mountain Medical Journal.

a. Provides a summary of the past decade of published papers which detail the outcome data of the conditioned reflex therapy of chronic alcoholism. It is noted that "since all of our patients are conditioned primarily and more than half are successfully treated by conditioning procedures alone we desire to have our methods identified primarily with conditioning procedures rather than with psychotherapeutic methods which we consider as adjunctive in certain cases only." (Page 185). The author discusses the difficult to condition patient, noting that "patients who are refractory to emetine are difficult to condition; the need in that case is an unusually large number of conditioning séances over a longer period of time, possibly being continued on an out-patient basis after a preliminary period of hospitalization." The author goes on to state that "we have experienced difficulty in conditioning some patients and have failed entirely in a few despite the normal reaction of nausea and vomiting following the administration of emetine…the cause of this refractoriness is unknown…" (Page 186). The importance of reinforcement is discussed, and the author states that that the value of reinforcement is twofold, "first in its effect of maintaining the conditioned aversion for liquor at its maximum level, and second because of the psychological benefit obtained by close reassociation of the patient with his problem." (Page 187).

15. Voegtlin, W.L. (1947). Limitations and adjunctive therapies in treatment of chronic alcoholism. Medical World, 65, 165-168.

a. Provides the following six possible reasons for chronic alcoholism: 1) physical illness or deficiency, 2) habituation resulting from prolonged heavy social drinking, 3) as an escape from environmental situations, 4) as a result of psychiatric imbalance, 5) as a symptom secondary to profound primary psychiatric difficulties, and 6) from varying combinations of two or more of the foregoing factors. The author noted that, originally, the staff of Schick Shadel believed that the conditioning procedures alone were sufficient in the treatment of alcoholism but that experience led to

the inclusion of adjunctive treatments, as well. The purpose of this report was identified as "to outline our methods so that others who might desire to pattern their efforts after ours might be encouraged to do so." (Page 189). The importance of proper medical evaluation is emphasized, as many patients presenting for the treatment of chronic alcoholism have other medical problems (e.g., liver damage, macrocytic hypochromic anemia, vitamin deficiencies, polyneuritis, subclinical gout, nutritional deficiencies). The use of a social service staff to determine the impact of the patient's drinking on his psychosocial situation is highlighted as a critical component of therapy, and it is noted that male and female ex-patients with social work backgrounds were recruited into these positions as the author "believes that the employment of ex-alcoholics for this activity makes possible a much stronger rapport between the institution and the patient." (Page 190). Patients who were determined to be "psychotic or deteriorated" were not accepted for treatment, and those with physical deficiencies are referred to their primary physician for treatment. Approximately 70% of patients admitted to the hospital were treated with the conditioning procedures alone, while others were treated with a more comprehensive program developed to meet their unique needs (e.g., employment, relationship problems, or legal problems). As detailed elsewhere, the use of the pentothal interview "has found wide application in the field of analytical psychiatry and psychotherapy…its main efficacy in the treatment of alcoholism lies in the rapid acquisition of material in the patient history that would require months of tedious endeavor to unearth by other means." (Page 192). The author summarizes the group's 11 years of experience with more than 4,000 patients by stating that "about 70% of all admissions require no further treatment than physical rehabilitation and conditioned reflex therapy with or without some degree of social rehabilitation. The remaining cases require further therapy in the form of intensive social service, conventional psychotherapy or pentothal interview." (Page 192).

16. **Lemere, F. (1947). Psychological factors in the conditioned reflex treatment of alcoholism. Quarterly Journal of Studies on Alcohol, 8, 261-264.**
    a. Provides a summary of the important contributions of psychological factors in the conditioned reflex treatment of alcoholism. It is noted that only patients who are psychotic are refused admission to the hospital. The importance of the desire to stop drinking is highlighted as an obvious psychological factor, and it is noted that a patient may be ruled out if there is no reported desire to stop drinking. It is noted that results with patients under the age of 30 have been very poor, which may be due to the fact that younger patients have not yet "suffered enough through alcoholism to be convinced of the necessity for complete and permanent abstinence." (Page 193). At the time of publication of this manuscript, patients were paying several hundred dollars for treatment, and the financial burden may help

by acting as a deterrent against relapse. That the Schick Shadel Hospital is devoted solely to the treatment of alcoholism was seen as highly favorable. The role of psychotherapy and patient education are discussed, and the important follow-up phase is outlines. It is noted that "one of the main values of the reinforcement procedure is that it provides a method of keeping in touch with the patient for at least a year." (Page 196).

17. **Voegtlin, W.L. (1948). Possible source of error in the quantitative determination of urobilinogen by Watson's method. American Journal of Clinical Pathology, 18, 84-86.**
    a. Presents a possible confound with regard to the determination of urobilinogen levels in urine specimens. The author notes that reflected or diffuse sunlight has a reducing effect on levels of urobilinogen in "rough proportion to the intensity of light." (Page 197). The author suggests actions which can be taken to reduce the effects of light on samples and further suggests that similar oversights may be a source of error for other research groups in other laboratories.

18. **Voegtlin, W.L. (1948). An improved liver biopsy needle. Gastroenterology, 11, 56-58.**
    a. Provides evidence of an improved method of liver biopsy than the traditional Vim-Silverman type liver biopsy needle. It is noted that the conventional Vim-Silverman type needle is composed of two portions, an outer trocar and an inner split needle. The improved needle includes a modification which is designed to hold the inner split needle in a constant position during the advance of the outer trocar. The author states that use of the conventional needle "in our hands was not entirely satisfactory," noting that it was often "necessary to make two or even three punctures before an acceptable specimen was secured." (Page 201). However, since adopting the modification, "every biopsy has resulted in securing a uniform specimen from 2 to 2.5 cm. in length with a uniform caliber of 2mm." (Page 201).

19. **Voegtlin, W.L. (1948). The conditioned reflex treatment of chronic alcoholism. Hygeia, The Health Magazine.**
    a. Provides support for the conditioned reflex treatment for chronic alcoholism. Both simple and conditioned reflexes are defined and described, and the case is made for the use of the conditioned reflex treatment for alcoholism. The importance of the environment surrounding the conditioning process is described, and the importance of the timing of the conditioned stimulus is emphasized. The author reports the outcome data of the Schick Shadel Hospital, and noted that "from an extensive study of nearly 5,000 cases treated by this method it has been found that conditioned reflex therapy along is insufficient for those alcoholics characterized by youth (under 23 years of age), chronic financial

indigence, criminal records, mental illness and psychopathic traits. From these data it has been determined that the most favorable type of patient is a person of middle age or older, of respectable habits (except for drinking) who has been steadily employed or moderately successful; a person who has the respect of friends or neighbors, and who drank normally, but in increasing amounts, for a number of years until he became unable to stop." (Page 206).

20. O'Hollaren, P., & Lemere, F. (1948). Conditioned reflex treatment of chronic alcoholism: Results obtained in 2323 net cases from 3125 admissions over a period of ten and a half years. The New England Journal of Medicine, 239, 331-333.

a. Summarizes 10 1/2 years of data on the conditioned reflex treatment of chronic alcoholism. Of the 3,125 admissions, the authors were able to analyze outcomes on 2,323 patients. The authors assert that, while the effect of the treatment may be transient, it has an "inherent value." Specifically they note that "85% of patient treated by this method will remain abstinent for 6 months or longer; 70% will remain abstinent for a year; 60% will remain abstinent for two years; about 55% will remain abstinent for three years; 40% will remain abstinent for four years; 30% will remain abstinent for seven years; and 25% will remain abstinent for ten and a half years or longer." (Page 208). Due to the comprehensiveness of the study, the authors acknowledge that the sample is a "cross section of humanity" which includes individuals who are varied in age, occupational and economic status, overall mental and physical health, and "sincerity" in their approach to treatment. As a result of the scope of this sample, the authors briefly discuss both risk and protective factors which can be considered in the course of offering conditioned reflex treatment of chronic alcoholism. Due to the longitudinal nature of this study, the authors also address the possible reasons for the exclusion of the 304 patients who did not complete treatment, and the 448 patients who could not be located for follow up data collection.

The page numbers provided with the quotations in the preceding entries are pages of the collected papers from *Alcoholism: Collected Papers of the Shadel Sanitarium*, not the original works. The following references for papers published after 1948 do not from include summaries. Summaries and/or the complete text of key entries will be future additions. The reference list includes selected publications of Ralph L. Elkins, Ph.D, who became the Schick Shadel Hospital Director of Research in June of 2008. Dr Elkins served as a Schick Shadel Research Consultant in the 1980's. His publications include animal model studies of aversion therapy processes as well as studies of aversion therapy treatments of substance dependent persons.

21. **Smith, J. W., (1966). Conditioned reflex aversion treatment of alcoholism. Western Medicine (Suppl), 3), 7, 45-47.**

22. **Smith J. W. Lemere, F., & Dunn, R.B. (1971). Pentothal interviews in the treatment of alcoholism. Psychosomatics, 12 (5), 330-331.**

23. **Elkins, R. L. (1972). Bait shyness, an adaptive adjustment with implications for aversion therapy approaches to the treatment of alcoholism. Newsletter for Research in Psychology, 14, 31-34**

24. **Elkins, R. L. Murdock, R.P., & Wiggins, S.L. (1972). Autonomic response changes associated with imaginary alcohol consumption and verbally induced nausea during covert sensitization treatment for alcoholism. Newsletter for Research in Psychology, 14, 29-31.**

25. **Elkins, R. L. (1973). Attenuation of drug-induced bait shyness to a palatable solution as an increasing function of its availability prior to conditioning. Journal of Behavioral Biology, 9, 221-226.**

26. **Elkins, R. L. (1973). Individual differences in bait-shyness: Effects of drug dose and measurement technique. Psychological Record, 23, 349-358.**

27. **Elkins, R. L. (1974). Bait-shyness acquisition and resistance to extinction as functions of US exposure prior to conditioning. Physiological Psychology, 2, 341-343.**

28. **Elkins, R. L. (1974). Conditioned flavor aversions to familiar tap water in rats: An adjustment with implications for aversion therapy treatment of alcoholism and obesity. Journal of Abnormal Psychology, 83, 411-417.**

29. **Elkins, R. L. (1975) Aversion therapy for alcoholism: Chemical, electrical or verbal imaginary? The International Journal of Addictions, 10, 157-209.**

30. **Elkins, R. L. (1976). A note on aversion therapy for alcoholism: Behavior Research and Therapy, 14, 159-160.**

31. **Elkins, R. L., U & Murdock, R.P. (1977). The contribution of successful conditioning to abstinence maintenance following covert sensitization (verbal aversion) treatment of alcoholism. IRCS: Medical Science: Psychology and Psychiatry: Social and Occupational Medicine, 5, 167.**

32. **Jackson, T.R., & Smith, J.W. (1978). A comparison of two aversion therapy treatments for alcoholism. Journal of Studies on Alcohol, 39 (1): 187-141.**

33. **Smith, J.W. (1982). Treatment of alcoholism in aversion conditioning hospitals. Jackson, T. R. & Smith, J. W. (1978). A comparison of two**

aversion therapy treatments for alcoholism. Journal of Studies on Alcohol 39(1): 187 – 191

34. **Smith, J.W. (1982). Treatment of alcoholism in aversion conditioning hospitals. In Patterson, E. M. and Kaufman, E. (Incl). Encyclopedic Handbook of Alcoholism (pp. 874 – 888) New York: Gordermer Press**

35. **Knowles, P., Smith J.W., & Lemare, F., (1983). A longitudinal analysis of patient characteristics at a private alcoholism hospital. Journal of Studies on Alcohol, 44, 524-529.**

36. **Lemere, F., (1987). Aversion treatment of alcoholism: Some reminiscences. British Journal of Addiction, 82, 257-258.**

37. **Smith, J.W., Schmelling G., & Knowles P.L., (1988). Long term outcome of clients treated in a commercial stop smoking program. Journal of Substance Abuse Treatment, 5, 33-36.**

38. **Smith, J.W., Schmeling, G., & Knowles, P.L., (1988). A marijuana smoking cessation clinical trial utilizing THC-Free marijuana, aversion therapy, and self-management counseling. Journal of Substance Abuse Treatment, 5 (2), 89-98.**

39. **Frawley, P.J., & Smith, J. W., (1990). Chemical aversion therapy in the treatment of cocaine dependence as part of a multimodal treatment program: Treatment outcome. Journal of Substance Abuse Treatment, 7, 21-29.**

40. **Howard, M. O. & Jensen, J. M. (1990). Chemical aversion treatment of alcohol dependence 1. Validity of current criticism. The International Journal of the Addictive, 25 (10): 1227 – 1262.**

41. **Smith, J.W., & Frawley, J., (1990).Long term abstinence from alcohol in patients receiving aversion therapy as part of a multimodal inpatient program. Journal of Substance Abuse Treatment, 7, 77-82.**

42. **Elkins, R. L., (1991) Chemical aversion (emetic therapy) treatment of alcoholism: Further comments, Behavior Research Therapy 5; 421 – 428.**

43. **Howard, M.O., & Elkins R.L., Rimmels, C., & Smith J.W. (1991). Chemical aversion for alcohol dependence. Drug and Alcohol Dependence, 29, 107-143.**

44. **Smith, J.W., & Farley, P. J., (1992). Alcoholism in relatives of primary cocaine-dependent patients. Journal of Substance Abuse Treatment, 9, 153-155.**

45. Frawley, P. J., & Smith J.W., (1992). One year follow-up after multimodal inpatient treatment for cocaine and methamphetamine dependencies. Journal of Substance Abuse Treatment, 9, 271-286.

46. Smith. J.W., (1995). Medical manifestations of alcoholism in the elderly. The International Journal of the Addictions, 30, (13&14).

47. Smith, J.W., (2000). Addiction medicine and domestic violence. Journal of Substance Abuse Treatment, 19, 329-338.

48. Howard, M.O., (2001). Pharmacoligal aversion treatment of alcohol dependence. Reduction and prediction of conditioned alcohol aversion. American Journal of Drug and Alcohol Abuse, 27 (3), 561-585.

49. Smith, J.W., Frawley, J.P., & Polissar, L., (2001). Six- and twelve month abstinence rates in inpatient alcoholics treated with aversion therapy compared with matched inpatients from a treatment registry. Alcoholism: Clinical and Experimental Research, 15,(5) 862-870.

50. Broderick, P.S., Elkins, R.L., Orr, T.E., Walters, P.A., & Thyer, B.A., (2004). Evaluating the relative effectiveness of three aversion therapies designed to reduce craving among cocaine abusers. Behavioral Intervention, 19, 107-143.

51. Frawley, J.P., & Howard, M. O., (2009). Principles of conditioning. Principles of Addiction Medicine, 4th ed. In press.