

THE HEALTH AND FIRST AID PROJECT

4-H CLUB CIRCULAR 15

COLUMBIA, MO.

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COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS

UNIVERSITY OF MISSOURI COLLEGE OF AGRICULTURE AND THE UNITED
STATES DEPARTMENT OF AGRICULTURE COOPERATING

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Health and First Aid Clubs*

REQUIREMENTS

There shall be five or more members in the Health and First Aid Club who are 10 to 21 years of age and who are meeting regularly, with their own officers in charge, under the direction of a local club leader.

Object.—The object of the health and first aid clubs is to promote health by emphasizing the daily practice of health habits by each member, by teaching the necessary precautions for avoiding accidents and injuries, and emergency care of these when they occur; and through the club group to develop an interest in community health problems.

Work Required.—Each club member is required to learn the health rules, to practice the health habits, to understand why they are essential to life, and to take training in the necessary precautions to avoid accidents and injuries and to care for the common emergencies as follows:

- (1) To learn how to make and use bandages: a. When the skin is not broken, as in bruises, sprains, dislocations, fractures, etc.
b. When the skin is pierced or broken. How to care for wounds, how to stop bleeding, etc.
- (2) To learn how to care for common emergencies: a. Fainting;
b. nose bleed; c. nausea; d. vomiting; e. burns; f. chills;
g. sunstroke; h. drowning.
- (3) To provide a few bandages and provide or maintain a properly equipped medicine chest to have on hand in the home.

Records Required.—Members will be required to keep records of their practice of health habits; the emergencies in which they have assisted; the construction, contents, and use of their medicine cabinets; and a record of the meetings, demonstrations, and exhibits held, in a record book provided by the Extension Service of the Missouri College of Agriculture.

Expense.—The expense of a club member is small, as each is required to furnish only those supplies which are not already in the home, such as gauze, bandage, cotton, adhesive plaster, etc.

Time Required.—Time necessary for practice of health habits and bandaging and for preparation of a medicine chest (See Page 33).

For attendance at six or more club meetings.

For attendance at an achievement exercise at the close of the year's work.

*Prepared by Miss Mary E. Stebbins, Extension Specialist in Health, in collaboration with Miss Sara H. Chiles, Assistant State Club Leader.

Organization.—These clubs should be organized in March, April, or May for summer club work, and in September, October, or November for winter club work.

SUGGESTED PROGRAMS FOR HEALTH AND FIRST AID CLUB MEETINGS

Standard clubs are required to hold at least six regular meetings during the club year. These meetings may be held as often as the local club leader and the members desire. It, however, is recommended that at least one meeting be held each month.

Club members should demonstrate practical phases of the work at each club meeting.

It may be necessary to devote more than one meeting to some of the suggested subjects.

I. First Club Meeting.—*Organization of the Club.*—Reference: The Club Secretary's Record Book.

1. The business meeting.—The local club leader in charge.
 - (1) Explanation of the duties of the club officers and members. Reference: The Club Secretary's Record Book.
 - (2) The election of club officers from the membership of the club: President, Vice-President, Secretary, Song and Yell Leader, and Reporter.
 - (3) Selection of a name for the club. (It is suggested that the name be selected so as to identify the club and the project.)
 - (4) Selection of time and place for regular club meetings.
 - (5) Setting of club goals.
 - (6) Appointment of a committee to work up or select an appropriate song or yell for the club.
 - (7) Assignment of the 4-H club pledge to be learned by all members before the next meeting.
 - (8) Adjournment of the business meeting for instruction in club work.
2. Instructions.—The local club leader in charge.
 - (1) Distribution of club literature and explanation of its use as follows:
 - a. A club circular and a club record book to each member.
 - b. A club secretary's record book to the club secretary.
 - c. The club book on songs and yells to the song and yell leader for the club.
 - (2) Explanation of standard 4-H club requirements.
 - (3) Explanation of the club project requirements for health and first aid work.
 - (4) Discussion of the main club events for the year.
 - (5) Specific statement of what each member must do to start the home project work. Weighing and measuring of club members.
 - (6) Assignment of work for the next meeting, including the bringing of record books to the meeting, and the report of the health examination made by physician. Assignment for roll call. Give your correct weight and state the percentage over or under weight."
3. Social hour.

II. Second Club Meeting

1. The business meeting.—The club president in charge. Reference: Duties of club officers in the Club Secretary's Record Book.
 - (1) Meeting called to order by the president, who leads the club members in repeating the 4-H club pledge as follows: "I pledge my *head* to clearer thinking, my *heart* to greater loyalty, my *hands* to larger service, and my *health* to better living, for my club, my community, and my country."
 - (2) Roll call by the secretary, the members responding by giving a report on a previously assigned topic.
 - (3) Reading of the minutes of the last meeting by the secretary, which should be adopted as a permanent record by the club when approved.
 - (4) Unfinished business:
 - a. Unfinished business from the last meeting.
 - b. Report of the committee on club songs and yells.
 - (5) New business:
 - a. Appointment of a social committee to plan for some games at future meetings.
 - b. Anything for the good of the club.
 - (6) Songs and yells, led by the song and yell leader.
 - (7) Adjournment for work.
2. Instructions and demonstrations.—The local club leader in charge.
 - (1) Health rule No. 1.—Page 16.
 - (2) Use of triangular bandages for the head, eye, jaw, chest, shoulder, hand, foot, elbow, knee, arm,, and as a sling.—Page 16.
 - (3) Explanation of how to keep the record book.
 - (4) Assignment of work for the next meeting, including the bringing of record books to the meeting, and assigning a progress report on the home project work for roll call.
3. Social hour.

III. Third Club Meeting

1. The business meeting.—The club president in charge.
 - (1) Meeting called to order by the president who leads the club in repeating the 4-H club pledge.
 - (2) Roll call by the secretary, the members responding by giving a progress report on their home project work and by handing in the record books for use in the club meeting.
 - (3) Reading of the minutes of the last meeting by the secretary.
 - (4) Unfinished business.
 - a. Unfinished business from the last meeting.
 - b. Report of the social committee.
 - (5) New business:
 - a. Appointment of committees.
 - b. Anything for the good of the club.
 - (6) Songs and yells.
 - (7) Adjournment for work.
2. Instructions and demonstrations.—The local club leader in charge.
 - (1) Health rules No. 2, 3, and 4.—Page 19.
 - (2) Use of compresses. Page 21.

- (3) Assignment of work for the next meeting, including the bringing of record books to the meeting and assigning health rules No. 2, 3, and 4 for roll call.
3. Social hour.

IV. Fourth Club Meeting

The business meeting.—The club president in charge.

- (1) Meeting called to order by the president, who leads the club members in repeating the 4-H club pledge.
- (2) Roll call by the secretary, the members responding by reporting on a previously assigned topic and by handing in the club record books for use in the club meeting.
- (3) Reading of the minutes of the last meeting by the secretary.
- (4) Unfinished business:
 - a. Report of social committee.
 - b. _____
- (5) New business:
 - a. _____
 - b. _____
- (6) Songs and yells.
- (7) Adjournment for work.
2. Instructions and demonstrations.—The local club leader in charge.
 - (1) Health rules No. 5 and 6.—Page 24.
 - (2) Common emergencies.—Page 26.
 - (3) Care of bruises, sprains, dislocations, and fractures.—Page 27.
 - (4) An examination of all record books.
 - (5) Assignment of work for the next meeting, including the bringing of record books to the meeting, and roll call assignment for each member to name one use of triangular bandages.
3. Social hour.

V. Fifth Club Meeting

1. The business meeting.—The club president in charge.
 - (1) Meeting called to order, members repeating the 4-H club pledge.
 - (2) Roll call, members responding by reporting on a previously assigned topic and by handing in the club record books for use in the club meeting.
 - (3) Unfinished business:
 - a. _____
 - b. _____
 - (4) New business:
 - a. _____
 - b. _____
 - (5) Songs and yells.
 - (6) Adjournment for work.
2. Instructions and demonstrations.—The local club leader in charge.
 - (1) Health rule No. 7.—Page 29.
 - (2) Care of wounds.—Page 31.
 - (3) How to stop bleeding.—Page 32.
 - (4) Examination of all record books.
 - (5) Assignment of work for the next meeting, including the bringing of record books to the meeting and the assignment of health rules No. 5, 6, and 7 for roll call.
3. Social hour.

VI. Sixth Club Meeting

1. The business meeting.—The club president in charge.
 - (1) Meeting called to order, members repeating the 4-H club pledge.
 - (2) Roll call, members responding by reporting on a previously assigned topic and by handing in the record books for use in the club meeting.
 - (3) Unfinished business:
 - a. -----
 - b. -----
 - (4) New business:
 - a. -----
 - b. -----
 - (5) Songs and yells.
 - (6) Adjournment for work.
2. Instructions and demonstrations.—The local club leader in charge.
 - (1) Health rule No. 8.—Page 33.
 - (2) Use of the medicine chest in the home and for common emergencies—Page 33.
 - (3) Examination of all record books.
 - (4) Assignment of work for the next meeting, including the bringing of record books and assigning for roll call the naming of four things that the home medicine chest should contain.
3. Social hour.

VII. Seventh Club Meeting

1. The business meeting.—The club president in charge.
 - (1) Meeting called to order, members repeating the 4-H club pledge.
 - (2) Roll call, members responding by reporting on a previously assigned topic and by handing in the record books for use in the club meeting.
 - (3) Unfinished business:
 - a. -----
 - b. -----
 - (4) New business:
 - a. -----
 - b. -----
 - (5) Songs and yells.
 - (6) Adjournment for work.
2. Instructions and demonstrations.—The local club leader in charge.
 - (1) Health rule No. 9.—Page 34.
 - (2) Artificial respiration, carrying the injured, emergency treatment for sunstroke.—Page 35.
 - (3) Studying the record books.
 - (4) Assignment of work for the next meeting, including the bringing of record books and the demonstrating by each club member of some practical work that he or she has learned in health and first aid club work.
3. Social hour.

VIII. Eighth Club Meeting

1. The business meeting.—The club president in charge.
 - (1) Meeting called to order, members repeating the 4-H club pledge.
 - (2) Roll call, members responding by reporting on a previously assigned topic and by handing in the record books for use in the club meeting.

- (3) Unfinished business:
 - a. -----
 - b. -----
 - (4) New business:
 - a. Appointment of a committee to help plan for the achievement day program.
 - b. -----
 - (5) Songs and yells.
 - (6) Adjournment for work.
2. Instructions and demonstrations.—The local club leader in charge.
 - (1) Selection of the demonstration team to represent the club by elimination contest.—Page 38.
 - (2) Final instructions on completion of club record books for the year.
 - (3) Final instructions on the club achievement day program.
 - (4) Instructions to the club reporter on news items for the local papers regarding the achievement day program and the work of the club for the year.
 3. Social hour.

IX. Ninth Club Meeting.—The Achievement Program

The achievement program should be held at the close of the work for the club year.

Each club member should hand in to the local club leader the completed record book so that the results of all the work of the club may be summarized for the year in the Club Secretary's Record Book.

All club members should exhibit the medicine chests which they provided for use in their own homes.

Suggested Public Achievement Program

1. [A typical club meeting by the club.
2. A brief history and a short statement of the club's achievements by a club member or by the local club leader.
3. One or more practical health and first aid demonstrations by club teams.
4. A talk on 4-H club work.
5. Awarding of 4-H Club achievement pins, if given, to each member of the club who hands in a complete record book to the local club leader.
6. Announcement of club plans for the coming year.
7. Adjournment.

Suggestions

Only club members who make a complete report or have their records up-to-date should be eligible to take part in county or state contests.

The events of the club achievement program and the results of the club work for the year should be carefully prepared and offered to the local newspapers for publication.

*My House of Health.
(Lowell.)*

I am building my Health House, day by day
As I eat and sleep and work and play,
My food is the lumber that I use,
And the best materials I must choose;
Such as milk and vegetables, fruit and eggs,
While fresh air furnishes nails and pegs;
And sleep, the carpenter takes them all
To silently fashion each room and hall.

If I build aright, when I am grown
I shall have a house I am proud to own.
No need for breakdown and repairs,
For good material wears and wears.
For I'm building my Health House, day by day
As I eat and sleep and work and play.
Some build for happiness and some for wealth,
But I shall find both in my house of health.

SUGGESTIONS FOR LEADERS OF HEALTH AND FIRST AID CLUBS

A foundation of early health habits is of untold value to every boy and girl and will help them to live happy and useful lives.

Our habits may give us either health, strength, and happiness or sickness and inefficiency.

A practice becomes a habit when it has been done so often that it is automatic and will be done without special thought or a definite reminder. Keeping a daily record will help make these health habits become automatic. This self training is very useful. No one can realize too emphatically the sacredness of the body, "the temple of the soul." For the various organs to work properly, one must stand, walk, and sit correctly; breathe deeply; have pure air night and day, winter and summer; eat the right food in the right amount at regular intervals; have a quiet and long sleep at night; and gain regularly in weight until full growth has been attained.

HOW TO WEIGH AND MEASURE CHILDREN

When taking measurements, remove the child's outdoor clothing, shoes, and coat. Take heights with a square, consisting of two flat pieces of wood joined at right angles (a chalk box will serve). The child is placed in a good,

erect position, with heels and shoulders against the wall or wide board, upon which has been marked or pasted an accurate measure. Age is taken to the nearest birthday.

WEIGHT-HEIGHT-AGE TABLE FOR BOYS

Height Inches	5 Yrs.	6 Yrs.	7 Yrs.	8 Yrs.	9 Yrs.	10 Yrs.	11 Yrs.	12 Yrs.	13 Yrs.	14 Yrs.	15 Yrs.	16 Yrs.	17 Yrs.	18 Yrs.	19 Yrs.
38	34	34													
39	35	35													
40	36	36													
41	38	38	38												
42	39	39	39	39											
43	41	41	41	41											
44	44	44	44	44											
45	46	46	46	46	46										
46	47	48	48	48	48										
47	49	50	50	50	50	50									
48	--	52	53	53	53	53									
49	--	55	55	55	55	55	55								
50	--	57	58	58	58	58	58	58							
51	--	--	61	61	61	61	61	61							
52	--	--	63	64	64	64	64	64	64						
53	--	--	66	67	67	67	67	68	68						
54	--	--	--	70	70	70	70	71	71	72					
55	--	--	--	72	72	73	73	74	74	74					
56	--	--	--	75	76	77	77	77	78	78	80				
57	--	--	--	--	79	80	81	81	82	83	83				
58	--	--	--	--	83	84	84	85	85	86	87				
59	--	--	--	--	--	87	88	89	89	90	90	90			
60	--	--	--	--	--	91	92	92	93	94	95	96			
61	--	--	--	--	--	--	95	96	97	99	100	103	106		
62	--	--	--	--	--	--	100	101	102	103	104	107	111	116	
63	--	--	--	--	--	--	105	106	107	108	110	113	118	123	127
64	--	--	--	--	--	--	--	109	111	113	115	117	121	126	130
65	--	--	--	--	--	--	--	114	117	118	120	122	127	131	134
66	--	--	--	--	--	--	--	--	119	122	125	128	132	136	139
67	--	--	--	--	--	--	--	--	124	128	130	134	136	139	142
68	--	--	--	--	--	--	--	--	134	134	137	141	143	147	
69	--	--	--	--	--	--	--	--	137	139	143	146	149	152	
70	--	--	--	--	--	--	--	--	--	143	144	145	148	151	155
71	--	--	--	--	--	--	--	--	--	148	150	151	152	154	159
72	--	--	--	--	--	--	--	--	--	--	153	155	156	158	163
73	--	--	--	--	--	--	--	--	--	--	157	160	162	164	167
74	--	--	--	--	--	--	--	--	--	--	160	164	168	170	171

To add to the interest in growth and development, a record of the weight of each boy and girl is to be made at each club meeting. This will help each to know his or her own gain. A height and weight card is enclosed showing the average weight for height for boys and girls of various ages. Comparison with this card will permit each member to know just how she or he compares with the average and what gain is being made.

The personal record is to be kept a part of each month so that good health habits will be formed.

"We learn to do by doing."

The habit of finishing a job, not quitting, is another good habit to form. This personal record should be carried through the full number of months as indicated.

WEIGHT-HEIGHT-AGE TABLE FOR GIRLS

Height Inches	5 Yrs.	6 Yrs.	7 Yrs.	8 Yrs.	9 Yrs.	10 Yrs.	11 Yrs.	12 Yrs.	13 Yrs.	14 Yrs.	15 Yrs.	16 Yrs.	17 Yrs.	18 Yrs.	19 Yrs.
38	33	33													
39	34	34													
40	36	36	36												
41	37	37	37												
42	39	39	39												
43	41	41	41	41											
44	42	42	42	42											
45	45	45	45	45	45										
46	47	47	47	48	48										
47	49	50	50	50	50	50									
48	--	52	52	52	52	53	53								
49	--	54	54	55	55	56	56								
50	--	56	56	57	58	59	61	62							
51	--	--	59	60	61	61	63	65							
52	--	--	63	64	64	64	65	67							
53	--	--	66	67	67	68	68	69	71						
54	--	--	--	69	70	70	71	71	73						
55	--	--	--	72	74	74	74	75	77	78					
56	--	--	--	--	76	78	78	79	81	83					
57	--	--	--	--	80	82	82	82	84	88	92				
58	--	--	--	--	--	84	86	86	88	88	93	96	101		
59	--	--	--	--	--	87	90	90	92	96	100	103	104		
60	--	--	--	--	--	91	95	95	97	101	105	108	109	111	
61	--	--	--	--	--	--	99	100	101	105	108	112	113	116	
62	--	--	--	--	--	--	104	105	106	109	113	115	117	118	
63	--	--	--	--	--	--	--	110	110	112	116	117	119	120	
64	--	--	--	--	--	--	--	114	115	117	119	120	122	123	
65	--	--	--	--	--	--	--	118	120	121	122	123	125	126	
66	--	--	--	--	--	--	--	--	124	124	125	128	129	130	
67	--	--	--	--	--	--	--	--	128	130	131	133	133	135	
68	--	--	--	--	--	--	--	--	131	133	135	136	138	138	
69	--	--	--	--	--	--	--	--	135	137	138	140	142	142	
70	--	--	--	--	--	--	--	--	136	138	140	142	144	144	
71	--	--	--	--	--	--	--	--	138	140	142	144	145		

Prepared by Bird T. Baldwin, Ph.D., and Thomas D. Wood, M. D. Published with the consent of the American Child Health Association, 370 Seventh Avenue, New York City.

The Health Examination

In every business it is necessary to take an inventory at regular intervals to know whether the business is living or dying.

The business of living also demands the taking of an inventory at regular intervals, this inventory being the health examination, which should be made by a physician at least once a year. Members of the health club should have such an examination made. This will help them to know their own defects and give them an opportunity to have such defects corrected. It will also let them know their good points and will give them a basis for watching their own improvement. It is a good plan to have this examination made by the family physician. It is advisable to have the health examination made at the beginning of the club work.

The leader of the club can often interest some physician in the club and its plans sufficiently so that he is willing to give enough of his time to examine the club members free of charge. It adds to the interest if the members can accompany the leaders to his office in a group.

Health examination should include test of vision and hearing, examination of teeth, throat, nose, heart, lungs, skin, feet, etc. Posture, and condition of scalp should be noted.

The height and weight of each club member will have been taken and recorded at the club meeting. Each member should take his or her record when going to the doctor for the health examination. Each member will be weighed and measured and the per cent underweight or overweight will be figured and recorded. Remember that the boy or girl who is 10% underweight is not developing the strong, useful body that he or she needs to serve all through life. The gain for each month can be figured also.

Promotion of Health

"Practice Makes Perfect."

"My body is the Temple of my soul. Therefore:
I will keep my body clean within and without;
I will breathe pure air and I will live in the sunlight;
I will do no act that might endanger the health of others;
I will try to learn and practice the rules of healthy living;
I will work and rest and play at the right time in the right way;
So that my mind will be strong and my body healthy;
And so that I will lead a useful life and be an honor to my parents and to
my country."

The above is a state health motto, but it is also a fine one for 4-H club members.

The Health and First Aid Club will suggest much that can be done to make the body strong and useful and beautiful, especially by the practice of such daily habits of living as will improve health and increase vitality.

What Health is

The dictionary defines health as "safe and sound, hale, hearty, whole in mind, body and soul."

What Boys Admire

"Every boy admires and covets for himself courage, physical endurance, and skill in athletics. Since these are based upon all-around physical development, on the well-being of nerve, muscle, bone and sinew, it is the sensible and manly thing for the boy to take an interest in the habits that keep his body clean, a smoothly working machine responsive to his will; in the foods that build his body and in those that harm it; in the proper proportion of rest and exercise in his daily life; in all of the few simple but essential fundamentals of health."

What Girls Admire

"Every normal girl admires beauty, every normal girl has the right as well as the desire to be good looking; that is, to be healthy, vigorous and full to overflowing with sheer joy of living. She covets the bright eyes, rosy cheeks, smooth skin, and glossy hair that nature intended every girl to have; the free, lithe body with strength and grace in every movement; and the vitality, energy, enthusiasm and ambition that win and keep friends. All of these depend upon health. Since health depends upon a few simple habits of right living, any girl who has the right 'stuff' in her will be eager to study herself. She will be anxious to learn how to bring about the changes in health habits that are necessary to make her dream come true."

Health Rules

1. Brush teeth each morning and night.
2. Wash the hands before eating.
3. Take a full bath at least twice a week.
4. Have a natural bowel movement daily.
5. Drink at least six glasses of water each day.
6. Eat some fruit and green vegetables each day.

7. Drink milk—one quart a day is desirable.
8. Play or exercise out doors each day.
9. Sleep long hours in the open air or with open windows:
Boys and girls 10-12 years old need 12 hours sleep.
Boys and girls 12-14 years old need 11 hours sleep.
Boys and girls 14-18 years old need 10 hours sleep.

Additional Suggestions

1. Correct physical defects, if any are found.
2. Eat meals at regular hours.
3. Chew food thoroughly.
4. Eat no sweets between meals.
5. Wear low-heeled, comfortable shoes.
6. Stand and walk properly—chest up, chin in, abdomen in.

Doubtless every boy and girl knows these health rules. Knowing them will not bring about that buoyant health each boy and girl desires. It is necessary to practice all these rules each day. For a time it may be necessary to make a conscious effort to remember to do these things. Daily repetition will reduce the effort required, and gradually these practices will become so much a part of the daily life that they will truly become health habits.

Very few people know how many of these rules they apply in their daily living unless they keep a record for a time. After these good habits become automatic it is no longer necessary to keep a record.

Health Records

Members of the Health and First Aid Club should start the record of their health practices at the first club meeting. Their club leader will show the members how the record book is to be kept. Then the members can mark their records for the day. This will help the members to know which habits they already have. This daily record is to be kept each day for the first month and the last two weeks of the second month. After that it is to be kept the last week of each month.

Members will want to know their own weight and the average weight for height and age as well as the rate of gain. This can be found out by making a comparison of own weight with the average weight as found on the height and weight chart.

“Look to your health, and if you have it, praise God and value it next to a good conscience.”

Prevention of Accidents

"Look Before You Leap."

Often repeated sayings after accidents are: "If I had done thus and so," "If I hadn't done thus and so," "If I had looked," "I might have known," "I didn't think," and so many similar expressions all pointing to the fact that accidents are practically always humanly avoidable.

Consideration of ways to avoid or prevent accidents is of more importance and interest than a knowledge of how to care for an accident. The habit of caution should be added to the other health habits which are to become automatic to the members of the Health and First Aid Club.

Over 90% of the accidents in the United States occur in the homes.

Some of the things to be remembered are:

1. Sufficient light is a great safeguard at all times and in all places.
2. Heed danger signals and signs.
3. A banana skin removed from the walk may prevent a broken bone.
4. Removing ice from porches, steps, paths, and walks, or sprinkling ashes, salt, or sawdust may save a life, concussion of the brain, or broken bones.
5. Testing the ice on a pond with some heavy weight before skating on it may prevent a death. Thin ice should be indicated by placing a danger sign.
6. Learning to swim will prevent drowning. Every person should know how to swim.
7. Sitting quietly in a boat will not upset it.
8. Putting out campfires will preserve many homes and lives and much property.
9. Starting a fire in a stove with kindling wood will not cause explosions and burns. Kerosene oil and gasoline used for starting fires have caused many serious burns and deaths and have destroyed many homes.
10. Opening tin cans with a good can opener is a safe way. Knives and other substitute implements frequently slip, resulting in cuts and scratches.
11. Protect against steam when removing a cover from a boiling kettle.
12. The head of a mule or horse never kicks. Watch his heels.
13. Keep a safe distance away from running machinery.
14. Look to the right and left before crossing a road or street.
15. Drive your own car carefully. You can't know what the "other fellow" will do.

16. Dim your lights when about to meet another car and slow down and do not attempt to pass cars at crossroads, railroads, curves, corners and hill tops.
17. Lighted matches or cigarettes combined with gasoline or kerosene produce disastrous results.

"A wise man is cautious in all things."

II. HEALTH RULE NO. 1. USE OF TRIANGULAR BANDAGES

Health Rule No. 1.—*Brush Teeth Each Morning and Night*

There was an old man with a tooth,
That ached 'till he said, "Tis the truth
I neglected them young,
And now I am stung,
How I wish I had brushed them in youth."

The first teeth are usually cut when one is six to eight months old, the last teeth when one is 19 to 20 years old. With proper care, teeth should remain sound as long as one lives.

Proper care includes daily cleansing, periodical inspection by a dentist, and eating tooth building foods. Read "Milk for Sound Teeth." (See General References, page 43.)

The teeth cut and grind the food, help us to talk, and give form to the face.

The enamel, which covers the crowns of the teeth, is a hard, white, shining substance, very brittle and easily polished. The thickness and strength of the enamel depends upon the foods eaten. Milk, leafy vegetables, fruit and whole grains are foods that build teeth.

The enamel is easily injured by biting or cracking hard substances as hard-shelled nuts. A crack in the enamel leads to decay and pain and means loss of the tooth unless properly cared for.

Clean teeth are very attractive and necessary to health. Only clean food should be swallowed. If the teeth are unclean, the food chewed is unclean; unclean food will be swallowed and the poisons absorbed into the system. Food left on the teeth presses on the gums, causing them to be pushed back. This may result in decay and other injury to the neck of the tooth and permit the entrance of bacteria, the origin of abscesses, and gum diseases.

Diseased teeth and gums make the breath foul and lead to more serious results.

Salt is one of the best things for cleaning teeth. The tooth brush should be small with the bristles set far apart and not too stiff. After using, it should be washed with clear water, the water shaken out and the

brush dried, if possible in the sun. Keep the tooth brush out of the dust and avoid letting it touch any other brush.

Song

(*Tune—Tramp, Tramp, Tramp, the Boys are Marching.* From the Child's Book of the Teeth.)

"Scrub! Scrub! Scrub! are the words of warning,
Keep all grinders shining bright.
Use your powder, brush and paste,
There's no time to lose or waste,
Keep them clean by brushing,
Morning, Noon, and Night."

"Eat whole wheat and eat whole oats,
Keep on chewing hard and right,
Build your teeth up strong and fine,
There's no time to waste or pine,
Eat the right food always,
Morning, Noon and Night."

Use of Triangular Bandages

Use of Bandages.—1. To keep dressing in place. 2. To hold splints in place. 3. To stop bleeding. 4. To serve as slings.

Triangular Bandages.—Triangular bandages are easily made, not difficult to apply as a temporary dressing, and will not cause injury by stopping the circulation. They are commonly made from unbleached muslin, 34 to 38 inches square, folded diagonally, and cut across the fold. They may be used folded or unfolded. Unfolded they are used as a triangular bandage or sling. If they are not to be used unfolded, they should be folded lengthwise to width desired. To fasten, tie the ends or use a safety pin.

Use of Triangular Bandages.—*Head bandage.*—(a) For forehead or top of head. Place bandage over the top of the head the long side level with the eyebrows, point hanging down in the back; bring ends of long side to back of neck; tie; turn point up over knot; and tuck in all ends and edges.

(b) For back of head. Reverse, placing long side low on neck and point between eyebrows.

Eye bandage.—Place the center of folded triangular bandage over the injured eye, bring the ends to the back of the head, and tie. A length cut from a roller bandage may be used in the same way.

Jaw bandage.—Fold two triangular bandages into scarfs, by folding point toward long side; double over once or twice more until scarf is two or three inches wide. Place one bandage across chin even with lower lip and tie ends at back of neck. Place second bandage under chin, catching edge of first bandage, and tie ends of second bandage over top of head. Tuck in all ends.

Chest and shoulder bandage.—Unfolded triangular bandage is used. The long side is placed horizontally across the chest. The upper end is brought over the shoulder and the ends are tied at the back.

Hand bandage.—The triangular bandage is spread out. The hand is placed on it palm down with the fingers toward the point. The point is then brought over the back of the hand to the back of the wrist and the two ends are crossed over the wrist and tied.

Bandage for palm of hand.—Use a folded triangle. Place the center of this on the palm of the hand. Cross the ends at the back of the hand and again in the front of the wrist and tie at the back of the wrist.

Foot bandage.—(a) For toes only—Place toes toward point; fold point back over toes; cross ends of long side over top of foot; carry under foot; cross; bring back to top of foot; and tie; tuck in ends.

(b) For heel—Place long side of bandage under middle of foot; bring point up at back of heel; cross ends of long side on top of foot, carrying to back of leg above heel; cross; bring back to front of leg; and tie. Turn point down and fasten. Point may be turned down inside bandage before bandage is applied. Tuck in all ends.

(c) For whole foot—Place toes toward point, long side at back of leg above heel; turn point back over toes; bring ends of long side around ankle; cross bandage over top of foot; carry back around the ankle; cross at back; bring to front of leg; and tie ends in front. Tuck in all ends.

Elbow bandage.—Fold bandage into scarf as described under jaw bandage, making scarf as wide as necessary. Place middle of bandage over elbow, bring ends to front, cross, carry back around arm above elbow, cross, bring back to front and tie. Tuck in all ends.

Knee bandage.—Same as elbow, placing middle of bandage over knee.

Arm bandage.—Fold bandage into scarf as described under jaw bandage. Place middle of bandage over part to be protected, carry up opposite side, cross, bring back, cross, and tie on side of arm opposite wound. Several bandages may be used if necessary.

Sling for the arm.—For a sling, a square yard of strong material should be used. Fold across to make triangle. Place one end of triangle over the shoulder of uninjured side. Allow length of bandage to hang down in front of chest so that the point of triangle will be behind the elbow of the injured arm. Bind the elbow of the injured arm at right

angles. This will bring the forearm across the middle of triangle. Then carry the lower end of the bandage over the shoulder of the injured side and tie to the upper end behind neck. Bring the point of the bandage to the elbow forward to the front and pin there so that the bandage is snug but does not pull. This makes an excellent arm sling but even without a bandage a good sling can be made for the arm by pinning the sleeve or skirt of the coat to the front of the coat. A woman's skirt can be used in the same way.

III. HEALTH RULES NOS. 2, 3, AND 4; USE OF COMPRESSES

Health Rule No. 2

Wash the Hands Before Eating

Whether or not the hands look clean, they should always be washed just before eating.

Disease germs live a "hand to mouth" existence. Nearly all diseases are carried from one person to another by transfer of that disease by way of the hands to the nose or mouth.

Unseen contamination on the hands will be transferred into the mouth by the food the hands touch in eating.

Colds, measles, whooping cough, and many other poisons enter the body this way.

Avoid wetting a finger to turn a page. Pencils and other articles should be kept out of the mouth.

Seal an envelope and moisten a stamp by using a sponge or a drop of clean water.

"Water and soap, water and soap,
Bring us health and bring us hope."

Health Rule No. 3.—Cleanliness Outside

Take a Full Bath at Least Twice a Week

"Cleanliness is akin to Godliness." "Clean up and keep it up." Cleanliness promotes self respect, clean thinking, clean living, and clean acting.

The skin is the protective covering of the whole body. Finger nails and toe nails are part of the skin and should be cleaned frequently.

The skin throws off or eliminates waste substances from the body. This process is continuous in winter and in summer. These waste substances must be frequently removed from the surface of the body in order to keep the pores clear and able to function. A clean body will have no odors and will need no perfume.

Clean skin will be smooth, clear, fresh and attractive.

Clean skin should be covered with clean clothing.

Every home should have some definite place set aside for bathing, which provides privacy at all times, which is convenient to the water supply and for disposing of the water after use, and which can be conveniently heated in cold weather. A small portable oil stove will usually provide sufficient heat in the absence of the regular heating plant.

It is possible to arrange such a bathing place in practically every home at a very little expense of time or money and it can be quite satisfactorily used until such time as a regularly fitted bathroom can be installed. Often part of a porch or a large closet can be arranged for this purpose.

A rubber tube with bulb and spray which operates on the siphon plan can be purchased for about \$1.25. Add to this a pail of water and tub or other receptacle for catching the used water and a complete bath is provided. Another device can be made by soldering a shower bath spray nozzle into an ordinary pail. A watering can may be used. Tie a rope to the handle of the pail and pass the rope through a pulley in the ceiling. The pail may be adjusted at the desired height by winding the rope around a hook or a nail in the wall. One kettleful of boiling water cooled to the proper temperature will provide water for three or four such baths using either of the above devices.

A drain through the floor and leading away from the building for a sufficient distance can be installed for a money expenditure of about the cost of the materials only, as either the men or the boys at the home can do the work themselves. Such a drain proves a great convenience as no water has to be carried away after the bath.

"All endearing cleanliness,
Virtue next to Godliness,
Easiest, cheapest, most needed duty,
To the body, health, and beauty;
Who that's human would refuse it,
When a little water does it?"

CHARLES AND MARY LAMB

Health Rule No. 4.—Cleanliness Inside

Have a Natural Bowel Movement Daily

Cleanliness of the inside of the body is as important as cleanliness of the outside.

Ashes, the waste matter from burning coal or wood, must be removed from the stove at regular intervals, if the stove is kept in good working order. So the waste matter, left from the digestion of food and

drink, must be removed from the body at regular intervals, if the body is to be kept in good working order. A regular time each day for emptying the bowels is an important health habit to acquire. Exercise: the drinking of plenty of water; the eating of an abundance of fruit, vegetables, and whole grain cereals will usually help those who have difficulty in getting rid of the waste of the body each day.

Read "Prevention and Correction of Constipation." General References, page 00.

Use of Compresses.

In many conditions compresses are found very useful as a means of reducing swelling and inflammation, relieving pain and preventing discoloration, and may be used either hot or cold, moist or dry, according to the requirements of the case.

Compresses are usually applied moist and hot in cases of boils, carbuncles, infected wounds; for sprains and over painful areas as joints, and sometimes for abdominal distension or pain.

Cold compresses are used in cases of bruises and similar injuries; if promptly applied over bruises of a superficial nature, discoloration will usually be avoided. Ice, in an ice cap or water bag, or cloths wrung out of ice water, or very cold water, may be used. A home made ice bag may be constructed from a well-scrubbed piece of inner tube. Twist and tightly tie one end of the piece to be used. Fill with cracked ice and similarly twist and tie the other end. When filling an ice bag or cap, it is well to pour hot water over the cracked ice, draining off immediately. This removes all sharp edges from the ice.

A moist hot compress affords the same treatment and secures the same result as a poultice, but is better than the usual poultice because it can be more readily prepared and can easily be made sterile (or surgically clean) and safe to use. Most poultices are not surgically clean and because of this are unsafe to use in many kinds of cases—resulting in damage instead of benefit. Many well-known and often-used poultices are distinctly dangerous and should be avoided. Some poultices can be made safe to use but usually are not so prepared. A flax-seed poultice, for instance, if the ground flax seed is boiled a long time and then enclosed in a boiled cloth would be safe to use on a boil, carbuncle or wound. This is a tedious and difficult procedure compared to preparing a compress. Hot pack, stupe, or hot fomentations are other terms used to designate a moist hot compress.

A moist hot compress or hot pack which is to be used in cases where there is no break in the skin or no infection, may be made of a bath towel or a piece of flannel or flannelette folded the required size, wrung out of

boiling water and cautiously applied by first holding the compress close to the skin, gradually allowing it to rest on the skin loosely and finally applying it directly and covering it with rubber cloth, folded bath towels, pieces of flannel or other material in order to retain the heat and moisture. The compress should be held in place with a bandage or towel.

To avoid blisters the pack must be wrung as tightly as possible. It is advisable to rub the skin with vaseline, sweet oil, olive oil or other plain oil before applying the compress.

It is usually neither desirable nor necessary to change the compress often; only when it becomes cool or dry. Hot water bags or some other form of dry heat as salt bags, applied over the binder will help retain the heat and avoid the too-frequent changing which interrupts the treatment. When changing the compress, have a second one ready to apply before removing the first one.

A stupe wringer is a great convenience when hot packs are being used as the pack though sufficiently heated may be wrung out as dry as it should be without burning the hands. Such a stupe wringer may be made by stitching hems in both ends of a strong piece of cloth, as a towel or piece of crash. Slip a strong piece of stick, as a piece of a broom handle, through each hem.



Fig. 2.—A stupe wringer is easily made.



Fig. 3.—The folded pack ready to boil.



Fig. 4.—Wringing out the pack.

Place the compress in the stupe wringer, twist the sticks in opposite directions until all excess water has been squeezed out of the compress remove the compress and apply.

For open wounds, for boils, carbuncles and infected wounds, it is wise to have the wet compress made of gauze or other loosely woven material, which must be boiled before being applied. In such cases the pack should be removed when soiled with pus or other secretions and should be burned, a new pack being prepared each time the pack is changed.

IV. HEALTH RULES NOS. 5 AND 6. CARE OF BRUISES, SPRAINS, DISLOCATIONS, FRACTURES, ACCIDENTS, AND COM- MON EMERGENCIES

Health Rule No. 5

Drink at Least Six Glasses of Water Each Day

Life is more dependent upon water than upon food. No plant or animal can survive when fluids are withdrawn. A person may live a long time without food if plenty of fluid is supplied, but if it is not the body dies rapidly.

Many foods supply a certain amount of water to the body; certain vegetables and most fruits are practically all water. This supply is, however, quite insufficient for the needs of the body and must be supplemented by drinking water, if health is to be acquired and maintained.

More than three-fourths of the body weight is water. This water is being given off all the time, in the breath, through the skin, and by the other excretory organs.

It is, therefore, necessary to take a regular quantity of water into the body to make up this loss and to regulate the body. Six glasses of water daily is the minimum amount which will supply these demands.

Water must be pure if taken into the body. Many diseases, as typhoid fever, dysentery, and the summer sickness of babies, are carried in the water. Be sure that the water in the well or cistern is not contaminated by any wastes washing or seeping into it. Ask the Missouri State Board of Health, Jefferson City, Missouri, where you can have your water supply analyzed.

When camping or picnicking, boil and cool the water before drinking it, as spring water is not safe to drink, unless it has been examined recently and reported safe. Individual drinking cups are essential to health in the prevention of the spread of contagion, as colds, measles, whooping cough, etc.

"Drink, drink, drink,
Water pure and bright;
Drink, drink, drink,
Morning, noon and night;
Drink, drink, drink,
In darkness and in light;
Drink, drink, drink,
And keep your body right."

Health Rule No. 6

Eat Some Fruit and Green Vegetable Twice Each Day

Clean, smooth skin, free from scales and other blemishes, is attractive and desirable. Fruits and green vegetables supply the substances which produce such a skin. They are as necessary in winter as in summer and can be readily supplied by giving some thought to the matter during the spring and summer. When planting the garden, remember that green vegetables should be eaten once, preferably twice, each day throughout the year to help regulate the body, so grow enough to supply a sufficient quantity for the needs of the family in the summer as well as to can or store for the winter. All vegetables except potatoes, corn, dried beans, and peas are classed as green vegetables. These are valuable foods but should not be eaten to the exclusion of the green vegetables.

Cabbage, carrots, beets, onions, turnips, parsnips, squash, rutabaga, and many others can be kept for winter use without canning.

Tomatoes are important as well as spinach and the other "greens."

Good Rules to Remember in Regard to Eating Fruits and Vegetables

Eat green vegetables at least twice each day.

All raw fruits and vegetables should be thoroughly washed before being eaten.

Plan to eat tomatoes two or three times a week.

Eat such green vegetables as greens, green beans, asparagus, cabbage, onions, canned peas, carrots, or lettuce at least twice a week, and if possible four or five times.

Eat a raw vegetable as onions, cabbage, celery, lettuce, or raw fruit on days when tomatoes are not served.

When fruits are ripe, it is well to store the larger quantity as canned fruit, and the lesser amount as jam or jelly. Jam or jelly should be considered as desserts and eaten in limited quantities, while the canned fruits can be eaten in larger quantities as a substitute for fresh fruits when such fruits are hard to secure.

"An apple a day
Keeps sickness away."

Common Emergencies

Nose bleed.—Keep head high. Place the first finger over lower edge of bone of nose on bleeding side and parallel with the bone. Use hand on bleeding side. Make firm pressure upward and inward. If bleeding is not readily controlled, send for a doctor.

Fainting.—Fainting is due to lack of blood in the head. Place the patient on the back with head lower than the body. Loosen collar and belt. Open the windows and keep the patient warm. Smelling salts or camphor may be held to nostrils. The face may be washed with a wet cloth. Avoid getting hair and clothing wet. When able to swallow, the patient may be given $\frac{1}{2}$ teaspoonful of aromatic spirits of ammonia in water.

Cramp or Colic.—Cramp or colic is a severe cramping pain in the abdomen. A heated stove lid or a hot water bottle should be placed on the abdomen. Rubbing the abdomen will often give relief. Hot water with a little sirup of ginger should be taken. Indigestible matter may be gotten rid of by drinking several glasses of warm salt water and vomiting or by a cathartic, such as salts or sedlitz powder. If there is a collapse or prostration, send for a doctor.

Nausea and Vomiting.—This is caused by indigestible food, dyspepsia, nervousness, or poison. When due to indigestible food, several large drinks of lukewarm water will usually cause free vomiting by washing out the stomach. Whatever the cause, the patient should lie down in a cool place. Hot applications of cloths wrung out of hot water or a mustard plaster may be applied to the abdomen. Drink $\frac{1}{2}$ glass of warm water in which has been dissolved $\frac{1}{2}$ teaspoonful baking soda. In severe cases, sucking small lumps of ice will help.

Chill from Exposure.—When a person is chilling, he is cold and his lips become blue and his teeth chatter.

Remove clothing, if possible, and put patient into a warm bed, covering warmly. Two or three hot-water bottles, hot bricks, hot stove lids, or jugs filled with hot water will soon warm the bed well. Rubbing the limbs and body under the covers will also bring the blood to the surface and help to cure a chill. Hot drinks as tea, coffee, milk, or lemonade, are all good.

Shock.—Shock often occurs in various kinds of injuries. The face is pale, the skin is cold and covered with cold sweat. The patient is more or less stupid. He may be partly or totally unconscious. Send for a doctor at once. Warm and stimulate the patient in every way possible. Place head low, apply heat externally. Cover with extra coats or blankets. Apply hot water bottles or hot bricks. Rub arms and legs toward body. Avoid uncovering the patient. Hot drinks should be given if patient is

able to swallow or a half teaspoonful of aromatic spirits of ammonia in a half glass of water. If head is injured, *never* give stimulants.

Neuralgia of the face.—This may be due to irritation or bad teeth. Always consult the doctor and find the cause. Sometimes attack comes on suddenly before the doctor can be obtained. In that case, use hot applications.

Rubbing and pressure on the painful nerves often give temporary relief. If due to a bad tooth, proper emergency treatment of the tooth by a dentist will frequently cure neuralgia.

Care for Accidents

"First aid" is employed to provide protection and comfort for the patient. Proper treatment furnished early often prevents later difficulty. In case of accident or injury some one person should take charge. Keep the crowd back. Be calm and do not be hurried. Be quiet and cool. Loosen collar and belt or other tight clothing. Get patient into comfortable position. The injury must be clearly seen before any attempt is made to treat it. It is generally necessary to remove some of the clothing, and this is likely to be painful and possibly dangerous to the person, unless handled with greatest gentleness. Rip up the nearest seam in the outer clothing and cut or tear underclothing. The sound side should be undressed first so that the injured side will be subjected to less movement. In injuries of the foot and ankle, it is seldom possible to remove a boot or shoe without giving severe pain and perhaps doing considerable damage, so they should be cut freely when this is necessary.

Injuries where skin is not broken

Bruises.—a. Bruises should receive attention to relieve pain, to prevent discoloration, to limit swelling.

- b. If severe, send for a doctor.
- c. Avoid moving the injured parts.
- d. Cold applications will relieve the pain and may prevent discoloration.
- e. Apply a firm, even bandage.
- f. Elevate injured part to relieve pain.

Strains.—a. Strains are produced by overstretching a muscle.

- b. Simple strains may be treated with hot or cold applications, gently rubbing toward the body.
- c. If severe, call a doctor.
- d. When pain and stiffness become less, gentle movement should be practiced.

Sprains.—a. Sprains are injuries to joints.

- b. Sprains of the wrist and ankle are the most common ones.

- c. When severe or in doubt, call a doctor.
- d. Begin treatment at once whether doctor has been called or not.
- e. Elevate injured joint and enforce absolute rest. Make hot or cold applications for 24 to 48 hours.
- f. Strap or bandage joint. In mild cases, movement may then be resumed.
- g. A severe sprain is not a trivial injury but one which demands the services of a doctor.

Dislocations.—a. Send for a doctor.

b. Remember that attempts to reduce dislocations, other than those of the finger or jaw, by one without a doctor's training may result in great harm to the patient. Place the patient in the most comfortable position and cover the injured joint with cloths wrung out of very hot or very cold water.

c. Dislocation of the fingers. The fingers should be grasped firmly on the hand side. The end of the finger should then be pulled straight away from the hand and the bone will usually slip into place. If any difficulty is encountered, the efforts at replacement should cease and the doctor's arrival be awaited.

d. Dislocation of the jaw. If the doctor can be promptly secured, await his arrival. If a doctor cannot be secured at once, someone else may reduce the dislocation. A dislocated jaw with the resulting open mouth is most painful and uncomfortable. To reduce a dislocation of the jaw, both thumbs must be wrapped in several layers of cloth, to protect them from injury. Both thumbs are placed in the patient's mouth, resting on the lower teeth on each side, while the fingers seize the lower jaw outside. Pressure is made downward and then backward. As soon as the jaw starts into place the thumbs should be slid off the teeth to the inside of the cheeks or they will be caught between the teeth when the jaw springs into place. When the dislocation is reduced, put on jaw bandages.

Fractures.—a. Send for a doctor.

b. The object of any treatment before the doctor's arrival is to prevent further injury, such as the puncturing of the skin with the rough edge of the bone.

c. Avoid moving the injured part or the patient, if possible. If unavoidable, limit the motion of the injured bone.

d. One hand should support the broken bone on each side of the break. The bone must not be bent.

e. Afterwards, the broken bone should be supported on a pillow or folded coat.

f. If the patient must be moved more than slightly, the end of the broken bone farthest from the body should be gently pulled and then supported by a splint on either side.

- g. If clothing must be removed, cut along the seams.
- h. The best position for the patient is usually on the back with the head low. If the face is pale, keep patient lying down, head low; if flushed, place head on pillow or folded coat.
- i. In case of vomiting, turn the patient on the side, or turn his head to one side so that the matter vomited will not get into his windpipe and choke him.

V. HEALTH RULE NO. 7; PASTEURIZATION; HOME STERILIZATION; CARE OF WOUNDS AND HOW TO STOP BLEEDING

Health Rule No. 7

Drink Milk—One Quart a Day is Desirable

“The milk way is the health way.”

Milk is the most nearly perfect food known. It helps to keep persons in good health and is essential for the best growth of the body, particularly of the bones and teeth. The growth of the bones continues until about the twenty-fifth year; the last tooth is usually cut during the nineteenth or twentieth year. Experiments have shown that a quart of milk a day during all of the growing period will furnish food stuffs for the best development of strong, hard bones and teeth.

Milk is an easily digested food. In addition to containing food stuffs that give energy and build muscle and bone, it contains vitamines that help keep persons in good health and that stimulate growth. A boy or girl who wants to develop the best and strongest body possible will drink a glass of milk each meal and eat milk dishes so that all together he or she gets a quart of milk a day.

It is necessary to know that the cows are free from tuberculosis, for milk from tubercular cows may produce tuberculosis of the bones, intestines, and glands in human beings. Cows should be tuberculin tested.

Precautions should be taken that milk remains clean during the handling incident to its production and care. It is easily contaminated and certain disease germs may be carried in milk as typhoid, scarlet fever, and diphtheria.

PASTEURIZATION

Pasteurization is recognized by health authorities as the most practical, economical, positive and best method of preventing the spread of disease through milk and can easily be done in the home.

Pasteurization is very simple. The milk is heated to 142° F. and kept at that temperature for 30 minutes, then cooled quickly and kept cool at 50° F. or colder.

In the home, pasteurization may be done by any of the following methods:

A. Place the bottles of milk on a support in a kettle of cold water; the water should come up on the bottles as high as the level of the milk in the bottles. Cover and heat the water without allowing it to boil and leave till small bubbles appear on the top of the milk. Remove the bottles and cool quickly, leaving the milk in the bottles until used.

B. Put a gallon (4 quarts) of water on the stove in a kettle. When the water is boiling hard, remove the kettle from the stove to a table and allow it to stand uncovered for 10 minutes; then put the filled and loosely corked bottles into the water, cover the kettle, and allow it to stand covered for half an hour. At the end of this time remove the bottles, cool rapidly under running water and keep cold.

When there is a large quantity of milk to be home pasteurized the following procedure may be used:

"Place on a stove a tank which is to contain the water and then set the milk can, containing the milk to be pasteurized, in the tank on a couple of bricks or a metal support so that the milk can will not rest directly on the bottom of the tank. Fill the tank with water about the level of the milk. Heat the water and the milk until the thermometer shows that the temperature of the milk is not less than 145 degrees Fahrenheit and not more than 150 degrees. Then change the thermometer from the milk to the water and add cold water until the temperature of the water is also 145 to 150 degrees F. Allow the milk to remain in the water at this temperature for thirty minutes. The process should be carried out in such a manner that the temperature of the milk at the end of the thirty minutes holding period will not be less than 142 degrees F. After the milk has been held at the proper temperature for thirty minutes it should be cooled by running cold water into the tank. Agitation of the milk during the heating and cooling periods will insure more uniform heating and more rapid cooling. The milk should be cooled to 50 degrees or less and kept this cold until used." Lewis Shere, and Harry F. Ferguson, Milk Sanitarians

Cooling Milk. Milk must be kept cold. The jars or cans may be covered and kept standing in cold running water. If running water is not available, it will be necessary to put fresh, cold water in the trough frequently. A refrigerator or refrigerated room in which to keep the milk is a safeguard and a great convenience. A home made ice box may be easily and cheaply constructed. Reference: "Production of Clean Milk, Missouri Agricultural Extension Service.

HOME STERILIZATION; CARE OF WOUNDS

Any material, as cotton or gauze, which will come in contact with an open wound, should be absolutely free of any germs (bacteria); they are then sterile and can be made so by a process called sterilization. That means that the materials have been rendered so hot that no bacteria can survive.

Sterilization may be done by boiling, baking or steaming. The sure process consists of using very hot steam about 350° F under about 15 pounds of pressure. This cannot be done without special apparatus.

Boiling for a sufficient length of time sterilizes. Scissors for cutting gauze, basins, jars and many other articles may be boiled. Gauze or other material that is to be used as a wet surgical dressing, may be sterilized by boiling. Articles that are to be used dry may be baked or steamed. Steaming is more reliable than baking.

Supplies to be baked or steamed should be made into small packages, each package wrapped in a piece of clean, white cloth, the covers lapped far over on all four sides and pinned.

(a). Steaming 1. Fill a wash boiler about $\frac{1}{4}$ full of water. Hang a piece of cloth from the handles of the boiler so as to form a hammock which hangs down about one-third the depth of the boiler. The ends of the hammock should be securely tied to the handles of the boiler. Put the packages to be sterilized into the hammock, tightly cover the boiler and allow the water to boil one hour after boiling point is reached. Hammock should not be tightly packed.

The contents of the packages will become wet with the steam. The packages may be dried by hanging in the sun on a clothesline, or by baking in a very slow oven with the door slightly ajar. The oven drying must be slowly done to avoid scorching and may take two or three hours.

2. Slip a pillow case of a flour or sugar sack over the cover of the boiler. Place the packages to be sterilized in the sack where it sags down on the inside of the cover. Fasten the open end of the sack by tying. Place the cover on the boiler into which water has been put and sterilize as above.

3. Glass jars containing dressings may be stood in water and boiled as when processing vegetables.

4. A pressure cooker makes a good home sterilizer as it affords steam under pressure.

(b). Baking—Wrap each separate package in a paper, tie, and bake in a slow oven till the paper is scorched. (2 to 3 hours).

Care of Sterilized Materials.

After sterilization the packages are not to be opened until the contents are to be used.

Care of Wounds

Injuries where the skin is broken.—a. The skin is the protective covering of the body.

b. Whenever the skin is broken there is danger of infection and inflammation.

c. (1) Slight bleeding will do no damage but will wash out dirt and germs that have been introduced when the injury was made.

(2) Severe bleeding must be controlled by making pressure on the artery with the fingers, between the injury and the heart. Have patient lie down with the head low. A tourniquet may be made of a handkerchief, towel, bandage, or neck tie. Wrap a stone, cork, or similar object and place over the artery above the wound. Pass the strap twice around the limb loosely on the outside. Pass a stick between the two layers thus formed and twist until the bleeding is stopped. It is dangerous to leave a tourniquet in position too long. If the doctor has not arrived by the end of an hour, loosen the tourniquet slowly. If there is no bleeding, leave the tourniquet loose, but if bleeding commences, tighten the tourniquet again.

d. Slight scratches and cuts. Slight scratches and cuts may be treated by applying Tincture of Iodine with a cotton applicator and the wound protected by sterile gauze held in place by adhesive plaster strips or a bandage.

e. Severe Cuts. Severe cuts should be treated by a doctor. Cover the wound with clean gauze. If bleeding is severe, treat as above.

f. Punctured wounds. Punctured wounds are dangerous because infection may have been placed at the bottom of the wound and the small opening does not afford an outlet. Apply a sterile wet dressing.

Burns.—a. Exclude the air promptly. When the skin is simply reddened, any kind of ointment that is clean may be used, as olive oil, sweet oil, vaseline, zinc ointment, fresh lard, or cream.

b. When a blister forms, puncture the blister at the lowest point with sterilized needle. Pat out the liquid with gauze. Apply ointment dressing. Bandage or fasten dressing with adhesive plaster strips.

c. When the skin and underlying tissues are destroyed prompt attention from a doctor is required. While waiting the doctor's arrival treat as above. Treat for shock if necessary.

Bleeding

Symptoms.—Symptoms of severe bleeding are like shock and should be treated first. Besides actual appearance of blood in hemorrhage, certain symptoms appear, as faintness with cold skin, pale face, anxious expression, breathing, sighing, weak pulse, dizziness or loss of consciousness. Severity of symptoms depends on how rapidly blood is lost.

Control.—Place pressure bandage above bleeding wound. Lay patient down. Keep patient quiet. Cover him warmly. See that he gets plenty of good air and, if he wants it, cold water to drink. Never give stimulants or rub to increase the circulation. Sometimes it is necessary to give stimulants to keep the person from dying. Whenever possible, avoid doing so before bleeding has stopped.

VI. HEALTH RULE NO. 8; USE OF THE MEDICINE CHEST

Health Rule No. 8

Play or Exercise out of Doors Each Day

Exercise is essential for the development of muscle, strength, vitality, and endurance.

Exercise and work are two different things. Work develops certain muscles and produces fatigue.

Play develops many muscles, lessens fatigue and often is a rest, even after hard work.

Play is the best exercise known and is one of the important health habits to be acquired from the standpoint of mental as well as physical health and development; it develops "brain and brawn," and makes possible good posture and graceful carriage.

Play or exercise out of doors "in the garden of health" is far superior to play or exercise in doors. Sunshine is necessary for all plant and animal life. Boys and girls cannot grow properly without having the sun shine directly on them. Window glass cuts out part of the sun's rays, the part which is most necessary for growth.

Play that exercises many muscles is the best kind of play. Swimming, rowing, skating, wrestling, coasting, hiking, climbing, running, jumping are some of the kinds of play that are good for both girls and boys.

Out-of-door games are very good and develop the spirit of cooperation, teamwork, and other qualities which contribute to good citizenship.

For suggestions for games and recreation see General References, page 43.

"Play's the Thing."

Use of the Medicine Chest

Each member of a Health and First Aid Club is required to make a medicine chest if there is none already available in the household.

If the home already has a satisfactory medicine chest, the club member will be expected to see that it is kept clean and in order and the equipment and supplies are maintained, but will not be expected to make a new medicine cabinet.

Reference: "The Family Medicine Chest," Missouri Agriculture Extension Service.

VII. HEALTH RULE NO. 9; ARTIFICIAL RESPIRATION, CARRYING THE INJURED, EMERGENCY TREATMENT FOR SUN-STROKE

Health Rule No. 9

Sleep Long Hours in Open Air or With Open Windows

Sleep is to human beings what winding is to a clock.

A sufficient amount of sleep is one of the most important requirements for growth and for mental and physical development. It is nature's opportunity to rebuild what has been worn out by the day's work, to build additional tissues for new growth, and to provide energy for the coming day.

Many boys and girls are underweight as much because of lack of an adequate amount of sleep as because of a lack of an adequate amount of proper foods.

Growth demands much sleep. Body growth continues until about twenty-five years of age.

Sleeping in a closed room robs the sleeper of much of the benefit which should come from sleeping and brings a morning of dullness and lassitude.

Sleeping out of doors or with windows open brings a morning of freshness, with clear head, happy smile, rosy cheeks, appetite for breakfast, a cheery "Good Morning" for the world and "pep" for the day.

In cold weather one should have plenty of light, warm covers, and should wear a cap if the wind blows over the bed.

Keep the nose and mouth uncovered. Sleep with the mouth closed. If you are inclined to open the mouth when sleeping, go to a doctor and find out whether there is any obstruction in your nose or throat that interferes with proper breathing. Any interference with proper breathing takes just that much rest away from sleep.

"Sleep that knits up the ravell'd sleeve of care,
The death of each day's life, sore labour's bath,
Balm of hurt minds, great nature's second course,
Chief nourisher in Life's feast."—MACBETH.

Artificial Respiration

Artificial respiration is a method of artificially supplying air to the lungs in the effort to re-establish breathing and is employed in the cases where the supply of air has been cut off from the lungs as when a person has been under water; in heavy smoke; in an explosion, from gas, as from a leaky pipe leading to a stove or light jet; or from carbon monoxide, the heavy gas sometimes encountered in mines and in badly ventilated garages, tunnels, and subways, which are over-crowded with automobiles or other gasoline engines.



Figs. 5 and 6.—Artificial Respiration

In any case, where breathing has ceased because the supply of fresh air has been cut off, remove the person to a place where fresh air is available, send for a doctor, loosen any tight clothing, and keep the crowd back.

Drowning.—Send for a doctor and pulmotor if possible. Do not wait for a doctor or pulmotor to arrive. Clean mud and water from nose and mouth with forefinger in a handkerchief. Place patient on his face, clasp around his waist and raise him by the middle with head hanging down. Hold him up for a few seconds in order that water may drain from throat and lungs. Place him on the ground face down, the arms stretched out at full length over his head or one arm bent so the forehead rests upon it. Turn the face to one side. Kneel by the side of or astride the patient's body without resting any weight on it. The palms of the hands are placed over the lowest ribs across the small of the back with thumbs nearly together. Lean forward and let your weight fall on your wrists. Exert this pressure for three seconds (To count 3 seconds say "One thousand and one, one thousand and two, one thousand and

three"). Without removing the hands from the ribs, release the pressure for 2 seconds (count, "one thousand and one, one thousand and two.") Continue this alternate pressure and release about 12 times a minute until breathing is restored. Artificial respiration should be continued for at least two hours unless breathing has been established earlier. If another person is present he should assist by keeping the body warm, rubbing the hands, feet limbs, drying the hair, and making hot applications. Camphor or ammonia may be applied to nostrils. Warm the head nearly as fast as the rest of the body. After breathing is restored, remove the patient to a warm bed where there is plenty of fresh air. Give small quantity of hot drinks, as tea, coffee or ginger tea.

Carrying the Injured

The best method of transporting an injured person is in a wagon or motor truck. The bottom of the vehicle can be padded with hay, straw,



Fig. 7.—Carrying the Injured.

clothing, or similar material and the patient laid on this or a mattress. It is imperative in fractures of the thigh or upper part of the leg that the patient be stretched out at full length, also that he be reclining if he has shock or other serious constitutional symptoms. The great number of automobiles and taxi-cabs in use and the speed and smoothness with which they travel makes them especially suitable for cases where the patient may be allowed to assume a sitting position, such as injuries to the upper extremities or the foot. Frequently such modes of transportation are unavailable and then recourse must be had to stretchers, or litters.

Stretchers are appliances for moving the sick or injured and are borne by two or more persons. The essential parts of a stretcher are two stout poles about 8 feet long with a strip of some strong material fastened between on which the person lies. The ends of the poles can be used as handles. A very serviceable litter may be devised out of two gunny sacks and two suitable poles. Two holes are made in the bottom of the sacks at opposite corners. The holes are placed inside the bags, thrust through holes, and the sacks drawn into place. Cross strips of wood may be lashed or nailed between the poles to hold them apart.

Another method is to lay a blanket on the ground and roll the outside edges around the poles and to continue the rolling until the poles are about 20 inches apart. The blankets are then fastened by nailing them to the poles or tying securely with strips of strong twine. Canvas may be used in place of a blanket.

A coat stretcher is constructed out of two coats and two side poles. The coat sleeves are first turned inside out. The poles are thrust through the sleeves from the shoulder and the coats buttoned around the poles with the buttons down, making a webbing across.

Every improvised stretcher should be tested by placing a well man on it before it is used for an injured person.

Ordinarily place the stretcher alongside the patient, who is on his back on the ground. If plenty of help is available, have one person raise the head and shoulders, another the hips, and a third the knees. These helpers stand or kneel on one side of the patient, with the stretcher on the other side. A fourth assistant stands on the opposite side and his whole duty is to reach over the stretcher and handle and support the injured arm or leg.

If two persons are present, the head and shoulders may be lifted on the stretcher first. The helpers then change their position to the lower part of the body and lift the hips and legs onto the stretcher, guarding the injured part as carefully as possible.

When the patient is on the stretcher he should be well covered with blankets or clothing. Ordinarily the bearers can well dispense with their coats for this purpose. It makes no material difference whether he is carried feet or head forward, except in going uphill or upstairs, when the head should always go first. The bearers should break step and proceed slowly. The stretcher handles should be supported by the arms hanging down and should not be borne on the shoulders. If obstacles are encountered it is best to try to go around them.

Occasions may arise when it is impossible to take sufficient time to obtain a stretcher or other appliance for carrying an injured person. Under such circumstances, it is necessary for the helpers to carry the patient without the assistance of any apparatus. If there are two bearers

a man may be carried a short distance on what is known as the "lady's chair." This is formed by each bearer grasping the left wrist with his right hand. The free left hand then grasps the right wrist of the other assistant. The injured person sits on the support formed and places his arms round the necks of the operators. Another method is for the bearers to stand side by side and each grasp the other's nearest shoulder. The outside hands are clasped together and the patient sits upon these. The other arms act as a backrest. An unconscious man may be carried for a short distance by the forward bearer standing between the legs and seizing the knees, and the rear bearer supporting the shoulders by putting his hands in the patient's armpits.

It is extremely difficult for one person to carry a patient for a considerable distance. If the patient is conscious, he may be carried on the back with his arms around the neck of the bearer and his thighs supported by the bearer's forearms in the manner known to children as "piggy-back." The greatest difficulty, however, comes when a single bearer attempts to pick up an unconscious person. It is, of course, practicable to lift a child or a very small adult in the arms, but with a heavy individual this is difficult for a man of ordinary strength.

Sunstroke

Sunstroke and heat exhaustion.—Send for a doctor. Remove patient to shade or cool spot. Loosen and remove as much clothing as possible. Apply cold water or ice to head and body. Put patient in tub of cold water, if possible, or wrap in sheets wrung out of cold water. If this is done, rub the patient continually to prevent shock and to bring the hot blood to the surface.

VIII. DEMONSTRATIONS

In so far as possible all club members should be instructed in the regular club meetings by the demonstration method. As a usual thing one or more members of each club can begin doing before the club useful phases of the work program soon after the processes have been demonstrated by the club leader.

After two or three months of practical experience in handling real things, all mature club members should be able to give public team demonstrations. The scope of the team demonstration usually should be limited to the essential processes of some phase of the club work of the current year on one subject. A team of two or three of the best demonstrators, according to the number needed, should be selected from the membership of one club, either by mutual consent or by competition. All teams should have an opportunity to demonstrate before the local club group and the people of the home community, and the championship team should represent the local club at the county roundup, if one is held.

SCORE CARD FOR JUDGING DEMONSTRATION TEAMS IN MISSOURI

	Perfect Score	Actual Score
1. Subject Matter.....	30	
(1) Importance of the subject matter presented and relation to fundamental problems of home or farm.		
(2) Accuracy of statements made in oral presentation and proper methods in doing the work.		
(3) Completeness with reference to the giving of all steps necessary to clear understanding of process.		
(4) Clearness and definiteness of statements made in simple language easily understood.		
(5) Replies to practical questions. Judges' questions only should be considered in team scores. Team should give authority for subject matter presented.		
2. Team Work.....	20	
(1) Preparation, arrangement and use of materiels. The team will be responsible for the arrangement and preparation of equipment and its use.		
(2) Organization of work, each member in so far as practical to be kept busy with a definite part so that the work and instructions given proceed without delay, but each member of the team should be able to demonstrate the whole process.		
(3) Appearance and conduct of the team. Appearance and conduct include the personal appearance of the members, and of the team as a whole. They should be businesslike, pleasant and so far as possible, a unit in action and appearance.		
(4) The team member not actually directing the demonstration should reinforce the point at hand or at least should not detract from the theme of the demonstration.		
3. Skill.....	20	
(1) Ease in procedure.		
(2) Workmanship and efficiency of manipulation.		
(3) Neatness and cleanliness in doing work.		
(4) Speed, system or dispatch.		
4. Results.....	15	
(1) Effect upon the audience, and also upon materials used in the demonstration, as may be shown in the finished product.		
(2) All processes made clear.		
5. Practicability.....	15	
(1) Value of principles given for the home, community.		
(2) Actual club practices shown.		
Total Score.....	100	

Date..... Demonstration Team.....
Signed..... (Judge)

Suggested Subjects for Team Demonstrations

- Carrying of an injured person.
- Hand-washing at picnics, camps, etc.
- Health postures.
- Home pasteurization of milk.
- Teeth and their care.
- Putting on bandages or other first-aid measures.
- Use and application of triangular bandages.
- Home sterilization.
- How to make, use and apply home compresses.
- Care of emergencies.
- Care of wounds and how to stop bleeding.

SUGGESTED OUTLINE OF A DEMONSTRATION ON USE OF THE TRIANGULAR BANDAGE

Explanation

This demonstration is arranged for a team of two members from the same club, designated as "A" and "B".

Equipment: Table, scissors, unbleached muslin, soft material as flour sack, large handkerchief, roller, and triangular bandages, splints, and safety pins.

It is suggested that each demonstrator wear a 4-H club cap, made up in the national club colors of green and white.

In as far as practicable, members should arrange their own equipment and stage and should clean up after the demonstration.

Time: Fifteen to thirty minutes.

Procedure

"A"	"B"
<p>"A" leads team in giving a club song and the 4-H club pledge; tells what club or county the team represents; introduces team-mate and self.</p> <p>States what the team will demonstrate.</p> <p>1. The uses of triangular bandage. (1) Purpose of triangular bandage.</p>	<p>"B" joins in giving club song and pledge, and then stands at attention until introduced.</p> <p>Gets the equipment in order on the table ready for work.</p> <p>Assists "A" as needed in the demonstration.</p>

<ul style="list-style-type: none"> (2) Materials. (3) Demonstrates and explains how to cut a triangular bandage. (4) Demonstrates and explains how to apply this bandage. <ul style="list-style-type: none"> a. To an injured eye. b. To hold a dressing on the chest. c. To use as a shoulder bandage. d. etc. <p>"My team-mate will show you some other uses of the triangular bandage."</p>	<p>Acts as patient</p>
<p>"A" assists</p> <p>Acts as patient.</p>	<p>"B" leads in speaking and demonstrating.</p> <p>2. Continues to demonstrate use of triangular bandages.</p> <ul style="list-style-type: none"> (1) As hand bandage. (2) To control bleeding. (3) As palm bandage. (4) As a sling for the arm. (5) For fastening on a splint. <p>"My team-mate will complete the demonstration."</p>
<p>"A" speaks</p> <p>Gives a brief summary of the uses of the triangular bandages. Asks for questions.</p> <p>Repeats questions and answers them.</p> <p>Concludes the demonstration.</p>	<p>"B" assists</p> <p>Folds up materials.</p> <p>May help in answering questions.</p>

SUGGESTED OUTLINE OF A DEMONSTRATION ON EMERGENCY CARE OF A BROKEN BONE

Explanation

This demonstration is arranged for a team of two members from the same club, designated as "A" and "B".

Equipment: Splints for arm and leg, bandage, strings, home-made stretcher, sling, and safety pins.

It is suggested that each demonstrator wear a 4-H club cap made up in the national club colors of green and white.

In as far as practicable, members should arrange their own equipment and stage and should clean up after the demonstration.

Time: Fifteen to thirty minutes.

Procedure

"A"	"B"
<p><i>"A" speaks</i></p> <p>"A" leads team in giving a club song and the 4-H club pledge; tells the club or county the team represents; introduces team-mate and self.</p> <p>Formally states what is to be explained and demonstrated.</p> <p>1. How to use splints on a broken arm.</p> <ul style="list-style-type: none"> (1) Demonstrates and explains use of splints. (2) Removes splints and explains process. <p>"My team-mate will show you how we learned to care for a broken bone in the leg."</p>	<p><i>"B" assists</i></p> <p>"B" joins in giving the club song and pledge, and then stands at attention until introduced.</p> <p>Gets material in order ready for use.</p> <p>Acts as patient with broken arm.</p>
<p><i>"A" assists</i></p> <p>Acts as patient.</p>	<p><i>"B" speaks and demonstrates</i></p> <p>2. How to use splints on a broken bone below the knee.</p> <ul style="list-style-type: none"> (1) Puts splints on and explains process. (2) Makes and explains how to make an emergency stretcher. (3) Asks for a volunteer boy to help carry the patient, explaining how to proceed. (4) Carries patient a short distance, then removes splints. <p>"My team-mate will complete the demonstration."</p>
<p><i>"A" speaks</i></p> <p>Summarizes the points demonstrated in the care of a broken bone.</p> <p>Asks for questions. Repeats questions and answers them. Concludes the demonstration.</p>	<p><i>"B" assists</i></p> <p>Gathers up all materials in orderly way.</p> <p>May assist in answering questions.</p>

GENERAL REFERENCES

Additional information on special subjects can be obtained from the following sources:

"Eyesight and Health," "How to Live Long," "Care of the Teeth," "First Aid in the Home," by Irving Fisher, Metropolitan Life Insurance Company, New York City.

"Tonsils and Adenoids," "Hand Washing Drill," (A method by which a large number of people can wash their hands in a short time, as before eating dinner at a picnic, supper at a church, or a community gathering where food is served), "Tooth Brush Drill", State Board of Health, Jefferson City, Missouri.

"Prevention and Correction of Constipation", "Milk for Growth, Health, Strength," Missouri Agricultural Extension Service, Columbia, Columbia, Missouri.

"Milk for Sound Teeth," price 3 cents; National Dairy Council, Chicago, Illinois.

"American Red Cross Abridged Text Book on First Aid," price 60 cents; Local Red Cross or St. Louis Branch of the National American Red Cross, St. Louis, Mo.

Suggestions for play and recreation; Agricultural Extension Service, Columbia, Mo.

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