INSTRUCTION/PROCEDURES MANUAL
FOR STUDENT ATHLETIC TRAINERS

By

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INTRODUCTION

Millions of individuals participate in organized and recreational sports. The participation leads to the possibility of injury. Each athlete participating in sports has a 50% chance of becoming injured (Arnheim, 1989). Although most injuries are not fatal the problem is that many of the injuries could have been prevented or decreased in severity, if qualified supervision were present.

Athletes have come to expect safe and qualified personnel to be present to take care of them. Because of this, "Athletic training is one of the fastest growing fields in the area of sports medicine." (Arnheim, 1989) After World War I the field of athletic training began to become more specialized and the athletic trainer began playing a major role in college athletics.

The National Athletic Trainers Association (NATA) was established in 1950 to enhance professionalism in the field of athletic training (Edwards, 1980). In 1956, the NATA had only 483 members. The organization has expanded to a membership greater than 12,000.

With the growth of athletic training comes the need for more qualified teachers and material with which to teach. Each year more and more college students are expressing an interest in athletic training. The number of instructors to teach these students can not keep up with the growth. Often
the person asked to instruct the students is also in charge of athletic training duties of five to ten sports. Today's athletic trainer must deal with insurance forms, drug tests, rehabilitation, treatment and prevention of injuries, training room maintenance, record keeping and education of athletes and student trainers. Because of time, limited staff, and mass practice schedules, student trainers are often put in situations for which they are not prepared. A trainer may be required to use students who have had only a couple of weeks experience, when a couple of years experience would be much more desirable.

A manual which contains both instructions and procedures could decrease the time demand that is necessary for quality instruction of student trainers and help prevent students from being put in situations for which they are not ready. The manual could decrease some of the wasted teaching time and repetition that is often necessary because of time limits, schedule conflicts and limited teaching time.

PROBLEM

In the past ten years athletic training has become one of the fastest growing fields in the United States. Apprenticeship is one of the best teaching methods for student trainers. However, when a student is at an athletic event or in a
busy training room there is not always paper and pencil around to take notes. This causes the trainer to constantly have to repeat and reteach the skills.

If the students had a guide to refer to and to study, it would serve as a constant reminder of forgotten information and allow them to study procedures on their own in a quiet environment. Continual repetition of instruction would be reduced. The manual could be kept in each student trainers' file in the training room for self-instruction and quick reference of forgotten details. It could easily become irreplaceable as a tool for student trainers' instruction.
WELCOME

This Instruction/Procedures manual is prepared in an attempt to outline some of your duties and responsibilities as a student athletic trainer and to familiarize you with some of the training room and Athletic Department policies which will govern your work. Three training rooms are in operation in Cassell Coliseum throughout the year; one primarily for men's football, one for the remainder of men's sports, and a women's training room on the third floor. Our training staff consists of a Head Athletic Trainer, 2 Assistant Athletic Trainers, 8 to 10 student trainers, 2 graduate assistants and a team physician. With this many staff members and with an extensive athletic program to cover, it is essential that our work be as well coordinated as possible. The key to well coordinated, effective service is uniformity in training room operation. Basically, this means that each student trainer must be thoroughly familiar with routine policies and procedures in order that the training rooms can be operated in a similar manner regardless of who is on duty. If each staff member were to operate the training room in a different manner, discipline problems, confusion and misunderstanding on the part of athletes and coaches would most likely result. With these thoughts in mind, we hope this Instruction/Procedures manual will help
answer some of your questions about your work and familiarize you with some of the general policies.

Use this manual as a study guide. Don’t expect to learn the entire manual your first year. It is designed to be used until the time you are certified and may be beneficial after certification. Read it, study it, make notes in it and never be afraid to ask questions.
FORMS

The appendices includes some forms that you will be expected to be familiar with and should know how to complete correctly.

The staff Roster (See Appendix A) is a listing of all the Training staff members and their phone numbers. Remember that the team doctors should only be called in emergency situations.

The Travel check list (See Appendix B) should be used by students when packing for an away trip. This helps to avoid forgetting of important supplies. Be sure to always double check your supplies.

The NATA student application (See Appendix C) should be filled out and mailed in by each student as soon as possible. It is very important for student trainers to become involved in the NATA.

The injury report form (See Appendix D) should be filled out for each injured athlete who is seen in the training room. Be sure that all blanks are filled in as much detail as possible. This form should always be checked by the head trainer before it is filed.

The cumulative injury report form (See Appendix E) should also be filled out on each athlete at the end of his or her playing season. This form allows us to keep a running list
of all the injuries to a particular athlete during his/her career.

A suggested reading list (See Appendix H) is also included. This list contains books that will help in your study of Athletic Training. All books listed are available in the coliseum and are strongly recommended.

A chain of command guide (see Appendix I) is included to give you an idea of when to call which staff member. When an athlete is seriously injured time is very important. Do not waste time trying to contact a staff member if you know an ambulance is needed. Call the ambulance first then try to contact the staff member if possible.
COMPETENCIES

This is a list of some of the treatments you will be called upon to perform while working in the training room. You must have been checked off in each before performing it on an athlete.

TAPING

Ankle (inversion, eversion)
Open basket weave
Arch
Turf toe
Shin
Knee
Thigh
Groin
Elbow
Wrist
Finger
Thumb

MODALITIES

Ultrasound (Under water)
Electrical stimulation
Fitron
Orthatron
Cybex
Pullies
Compression pump
Traction
Hydrocollator
Whirlpool

BRACES/STABILIZERS
Knee Brace
Knee Immobilizer
Ankle brace
Shoulder stabilizer
Crutches
Air casts

OTHER
Practice behavior
Hyperventilation
Primary care
Ankle rehabilitation
TRAINING ROOM RULES

1. Do not wear spikes or cleats in the training room.

2. Do not dress in the training room.

3. Wear shorts at all times in the training room.

4. No treatments will be given during the one hour period before practice without permission of the trainer.

5. Arrive in the training room at least 30 minutes before practice time if taping is necessary.

6. Wait your turn in the waiting area, not on the treatment or taping tables.

7. Avoid self-treatment; all tapings, bandages, and other treatments will be applied by the trainer.

8. Do not use training room equipment or supplies without permission of the trainer.

9. Do not remove equipment or supplies from the training room without permission of the trainer.

10. Avoid horseplay, improper language, and all unnecessary confusion.

11. Take a shower before using the whirlpools.

12. After practice take a shower before treatments or seeing team physician.

13. No loitering in the training room.

14. Clean up after yourself.

15. No treatments will be given to visiting athletes without a note from a certified trainer.
TRAINING ROOM DAILY CHECKLIST

1. Fill whirlpools.
2. Make sure taping tables are stocked for taping.
3. Get ice.
4. Check to see that kits are stocked.
5. Keep injury and treatment records.
7. Check cabinets and supplies.
8. Clean counters and tables with disinfectant
9. Clean up office and desk.
10. Take dirty towels to laundry.
11. Drain and clean whirlpools.
12. Check to make sure everything is in order before leaving.
13. Last person to leave should make sure lights are out and
doors are locked.
WEEKLY CHECK LIST

1. Stock and clean refrigerator.
2. Add hydrccollator covers to laundry.
3. Clean coolers and lids.
4. Clean whirlpool with cleaner.
5. Clean sink and mirror.
6. Clean/add water to hydrccollator.
7. Dust
8. Make doughnuts
9. Make skin lube pads.
10. Clean and straighten counter.
11. Check and straighten kits.
DO'S AND DONT'S FOR THE TRAINER

DO:
1. Require physical examination for all players.
2. Provide adequate supervision of athletes.
3. Make all procedures known in writing.
4. Obtain the services of a team physician.
5. Equipment/modality checks should be made regularly.
6. Take a course in CPR.
7. Become familiar with the medical history of all athletes.
8. Become familiar with proper equipment and its' fitting.
9. Keep records of all injuries and treatments.
10. Familiarize yourself with all emergency procedures.

DO NOT:
1. Panic
2. Give out any prescription medications.
3. Use modalities for which you are not qualified.
4. Permit players with questionable injuries to participate.
5. Let coaches or athletes influence decisions.
6. Do anything you are not legally qualified to do.
7. Move any injured player until you are sure of injury.
8. Prescribe treatment out of your realm of knowledge.
DRUG TESTING

The Drug Committee at Virginia Tech has decided there will be weekly drug testing of the Varsity athletes. This is a very serious and confidential procedure. All rules and instructions are expected to be followed. Any suspicions or violations should be reported to the staff and nothing that occurs during testing should be publicly discussed.

For further explanation see Appendix G.
PROCEDURES AS OUTLINED BY VIRGINIA TECH DRUG COMMITTEE

GENERAL MEETING

A) CHECK ROLL

B) MEETING ROOM

Give everyone a form as they arrive
No one leaves once they enter
Complete the form
Keep form until time to give sample

C) GIVING SAMPLE

Remain seated until called
Ask if they are ready to give sample. Take only when ready.
Leave only with a student trainer
Mark name off list

D) IF UNABLE TO GIVE SAMPLE

Bottle returned to table
Athlete returns to general room
Athlete keeps form

OBSERVER

A) PICK UP ATHLETE IN MEETING ROOM

Check form for accuracy
Athlete must go directly to rest room and cannot leave your sight.

B) RETURNING TO TABLE WITH SAMPLE
Form is completed at table
Bottle is labeled with name and number from form
Do not smear ink on bottle
Athlete ONLY handles bottle

C) OBSERVING GIVING OF SAMPLE
   Athlete must be observed at all times
   Instruct athlete to tighten lid.

D) GO TO TABLE TO SEAL SAMPLE
   Give form to staff member
   Athlete dates and initials seal
   Athlete seals bottle. Do not cover up number on bottle
   Athlete initials and signs proper area
   Form are witnessed and completed
   Forms and sample are bagged
   Athlete initials bag and it is collected

D) RETURN FOR NEXT ATHLETE
   If athlete can not give sample:
   Bottle is returned to table, lid loose
   Athlete is returned to central meeting
   Athlete keeps form

** Never hesitate to notify staff of any suspicions!

BOTTLE TABLE

A) COMPLETE TOP OF FORM
Receive form from athlete
Fill in date, time, am/pm, Urine sample

B) MARK BOTTLE
Print request number from form

C) GIVE BOTTLE TO ATHLETE
Do not smear ink

D) GIVE FORM TO OBSERVER

IF UNABLE TO GIVE SAMPLE:

Bottle is returned to you
Athlete keeps form
Keep marked bottles separate
Any suspicious bottle throw out
Lids should be loosely attached
EVALUATION

Proper evaluation is crucial to insure proper treatment. The next few pages include some guidelines and check lists that should be used as a quick reference for evaluation. Failure to properly evaluate an athlete could lead to increased trauma and injury. It is very important that the evaluation be thorough and correct.
MEDICAL EMERGENCIES

The ability to adequately meet any emergency situation is based upon thoughtful preparation prior to any emergency occurring.

CONSIDERATION

First aid
Communications system
Quality emergency care facility near by
Notifications
Transportations

When approaching the injured athlete;
rule out the most serious injury first
find out what happened
locate the injury
begin primary evaluation
decide the best and safest removal procedure

After athlete has been relocated;
completely evaluate
decide whether the athlete can continue activity
administer proper treatment
recommend additional medical care if necessary
HEAD AND NECK INJURY

STABILIZE HEAD

ESTABLISH LEVEL OF CONSCIOUSNESS

REMOVE MOUTH PIECE

CHECK FOR BREATHING

NO BREATHING

LOGROLL TO FACE UP

REMOVE FACE MASK

CHIN LIFT/JAW THRUST

MOUTH-TO-MOUTH

CHECK PULSE

BREATHING

MAINTAIN AIRWAY

LOGROLL TO FACE UP

REMOVE FACE MASK

NEUROLOGICAL EVALUATION

SPINE-SPLINT BOARD

TRANSPORT

NO PULSE

ACTIVATE EMS

REMOVE JERSEY AND PADS

BEGIN CPR

SPLINT-SPINE BOARD

TRANSPORT

PULSE

RESCUE BREATHING

NEUROLOGICAL EVALUATION

TRANSPORT
HAND AND WRIST

HISTORY

previous injury
unusual sounds
type of pain
when pain occurs
acute or chronic
mechanism of injury

INSPECTION

wrist drop
deformity/swelling
discoloration
nail beds
compare bilaterally

PALPATION

heat
swelling
crepitus
spasm
abnormalities
radius
radial styloid process
pisiform
hook of hamate
metacarpals
metacarpalphalangeal joint
phalanges
proximal interphalangeal joint
navicular
lunate
ulna
ulna styloid process
carpal tunnel
thenar eminence
hypothenar eminence
radial artery
pain and point tenderness

EVALUATION (PROM, AROM, RROM)

wrist flexion
wrist extension
ulnar deviation
radial deviation
finger flexion
finger extension
finger abduction
finger adduction
thumb flexion
thumb extension
thumb abduction
thumb adduction
opposition

SPECIAL TESTING

Finkelstein Test
Tinel Sign
Phalen's Test
Bunnel-Littler Test
Allen Test
Sensation Testing
Flexor Digitorum Superficialis
Flexor Digitorum Profundus Test
Retinacular Test
KNEE

HISTORY

previous injury
unusual sounds, sensations and type of pain
when pain occurs
acute or chronic
mechanism of injury

INSPECTION

bilateral comparison
swelling
deformity
discoloration
inspect thigh muscles
genu varus, genu valgus, and recurvatum
Q-angle
gait
path of patella

PALPATION

pain and point tenderness
spasm, swelling and crepitus
tibial tubercle
femoral condyles
head of fibula
patella and borders
joint line, medial and lateral quadrant tendon
pes anserine insertion
MCL
LCL
iliotibial tract

FUNCTIONAL TESTING
AROM on flexion and extension
PROM on flexion and extension
RROM on flexion and extension
valgus stress test in 30 degrees flexion
valgus stress test in full extension
varus stress test in 30 degrees flexion
varus stress test in full extension
perform anterior drawer test
perform posterior drawer test
McMurray test
Apley’s compression test
Apley’s distraction test
bounce home test
patellar grinding test
apprehension test
Lachman’s test
ANKLE

HISTORY

previous injury
unusual sounds or sensations
when pain occurs
determine mechanism of injury

INSPECTION

bilateral comparison
swelling
deformity
discoloration
shoe wear pattern
walking

PALPATION

pain and point tenderness
swelling, crepitus, spasm
malleoli
calcaneus
fibula, tibia
palpate ligaments medial and lateral
tibial artery
Achilles tendon

FUNCTIONAL TESTING (AROM, PROM, RROM)
dorsiflexion
plantarflexion

clockwise circumduction

counterclockwise circumduction

SPECIAL TESTS

anterior drawer test

posterior drawer test

heel tap

squeeze tibia and fibula
ELBOW

HISTORY

unusual sensations
unusual sounds
type of pain
when pain occurs
acute or chronic
previous injury
mechanism of injury

INSPECTION

compare bilaterally
swelling
deformity
discoloration
carrying angle
scars

PALPATION

medial epicondyle
medial supracondylar ridge
olecranon
ulnar border
olecranon fossa
lateral epicondyle
lateral supracondylar ridge
radial head
ulnar nerve
wrist flexor/pronator group
medial collateral ligament
supracondylar lymph nodes
Olecranon bursa
triceps
wrist extensors
lateral collateral ligament
annular ligament
cubital fossa
heat
swelling, crepitus
spasm
abnormalities
pain and point tenderness

EVALUATION (PROM, AROM, RROM)
flexion
extension
pronation
supination

SPECIAL TESTS
biceps reflex
triceps reflex
Brachioradialis reflex
sensation testing
valgus stress test
varus stress test
Tinel sign
tennis elbow stress test
Annular ligament test
SHOULDER

HISTORY
primary complaint
previous injury
location of pain
type of pain
mechanism of injury
unusual sensations
unusual sounds
onset of symptoms
activity at time of injury

INSPECTION

 carrying angle of the arm
deformity
swelling
discoloration
compare bilaterally
sternoclavicular joint
clavicle
acromioclavicular joint
glenohumeral joint
scapulothoracic region
smoothness of movement

PALPATION
tenderness, swelling, deformity, crepitus
palpate bilaterally
sternoclavicular joint
clavicle
acromioclavicular joint
coracoid process
greater tuberosity
bicipital groove
spine of scapula
vertebral border of scapula
pulses
neurologic pathways
axilla
muscles

EVALUATION

Active range of motion tests

flexion
extension
abduction
adduction
horizontal flexion
horizontal extension
internal rotation
external rotation
scapular elevation
scapular depression
resistive range of motion tests
passive range of motion tests

SPECIAL TESTS

Yergason’s test
Drop arm test
Centinela test
Apprehension test
Impingement Syndrome test
Compression test
Distraction test
Apley
Scratch test

NEUROLOGICAL TESTS

sensory and motor state

referral areas - elbow, chest, neck
HIP AND PELVIS

HISTORY

previous history
unusual sensations
unusual sounds
type of pain
when pain occurs
acute or chronic
mechanism of injury

INSPECTION

bilateral comparison
swelling
deformity
discoloration
facial expression
gait
posture

PALPATION

pain and point tenderness
local heat
spasm, swelling, crepitus
abnormalities
anterior superior iliac spine
iliac crest
greater trochanter
posterior superior iliac spine
ischial tuberosity
L4 and L5 spinous processes
inguinal ligament
sciatic nerve
rectus femoris
hamstrings

EVALUATION
flexion
extension
adduction, adduction
internal rotation
external rotation

SPECIAL TESTS
Trendelenburg test
leg strength
Ober’s test
Thomas test
LUMBAR SPINE

HISTORY

previous injury
unusual sensations
unusual sounds
type of pain
when pain occurs
acute or chronic
mechanism of injury

PALPATION

pain and point tenderness
local heat
spasm, swelling, crepitus
abnormalities
iliac crest
L4 - L5 vertebrae
coccyx
spinous process
posterior superior iliac spine
greater trochanter
ischial tuberosity
paraspinal muscles
sciatic nerve
anterior abdominal muscles
other muscles

FUNCTIONAL TESTING
Active and Resistive flexion
extension
lateral bending rotation
rotation

NEUROLOGICAL
T12, L1, L2, L3
muscle testing - Iliopsoas
sensation - Anterior thigh

L2, L3, L4
Muscle Testing - Quadriceps or Hip adductors
Sensation - None

L4
Muscle testing - Anterior Tibialis
Sensation - Medial ankle
Reflex - Patellar

L5
Muscle Testing - Extensor Hallicus Longus
Sensation - dorsum of foot
Reflex - none

S1
Muscle Testing - Peroneus longus and brevis
Sensation - lateral ankle

Reflex - Achilles

SPECIAL TESTING

Babinski
Straight leg raise
Hoover Test
Kernig test
Valsalva Maneuver
Pelvic rock test
Gaenslins's sign
Patrick test
Beever's test
CERVICAL SPINE

HISTORY

previous history
unusual sensations
unusual sounds
location of pain/paralysis
type of pain
when pain occurs
acute or chronic
mechanism of injury

INSPECTION

swelling
deformity
discoloration
scars
facial expression
posture
smoothness of movement
spinal alignment
level of shoulders

PALPATION

Hyoid bone
Thyroid cartilage
First Cricoid Ring
Carotid pulse
Occiput
Inion
Superior Nuchal Line
Mastoid Processes
Spinous Processes of Cervical Vertebrae
Facet joints
Sternocleidomastoid muscle
Lymph node chain
Supraclavicular fossa
Upper Trapezium
Superior Nuchal ligament

Range of Motion
Active, Passive and Resistive Range of Motion

Flexion
Extension
Rotation
Lateral Bending

NEUROLOGIC LEVEL EXAMINATION

C5

Deltoid strength/Bicep strength
bicep reflex
sensation - lateral upper arm

C6
Bicep strength/Wrist extensor strength
brachioradialis reflex
sensation - thumb

C7
Tricep strength/Wrist flexor strength
tricep reflex
sensation - Middle finger

C8
Finger flexion, abduction, adduction
no reflex
sensation - little finger

T1
Finger abduction, adduction
no reflex
sensation - Medial elbow

SPECIAL TESTS
Distraction
Compression
Valsalva Test
Adson Test
Swallowing Test
ABDOMINAL INJURIES

HISTORY

- blood in urine
- localization of pain
- radiation and referral of pain
- quality of pain
- duration of pain
- intensity of pain
- onset of pain
- mechanism of injury
- history of vomiting
- diarrhea
- blood in stool

INSPECTION

- swelling/deformity
- rigidity in quadrants
- discoloration
- signs and symptoms of shock
- scars

PALPATION

- quadrants (4)
- swelling
- fever
- rigidity
point tenderness

appendix

EVALUATION

check temperature
check blood pressure
check pulse
check respiration
perform rebound test
active trunk flexion
superficial abdominal reflex

Physician referral
MODALITIES/REHABILITATION
MODALITY GUIDELINES

ULTRASOUND

PHYSIOLOGICAL EFFECTS

Deep heating, promotes circulation and healing

INDICATIONS

post acute injury

TECHNIQUES

Use an intensity of 0.5 to 1.5 depending on the density of the tissue being treated.

TIME INTERVALS

5 minute treatment time

PRECAUTIONS

Move head slowly in a circular motion. Never use on epiphyseal plates, ischemic areas, metal implants, or after recent surgery.

HYDROCOLLATOR

PHYSIOLOGICAL EFFECTS

Circulation is increased, tissue temperature rises, relaxes muscles, helps relieve muscle spasms.

INDICATIONS

Post acute conditions of sprains or strains

TECHNIQUES

Wrap in hydrocollator cover or in about 6 layers of towels.
TIME

10 to 20 minutes per application

PRECAUTIONS

Never apply where there is a loss of sensations, immediately after an injury, when there is decreased arterial circulation, or directly over eyes or genital areas. Do not overheat sensitive skin.

WHIRLPOOL

PHYSIOLOGICAL EFFECTS

Circulation is increased followed by a reduction in congestion, spasm, and pain. Relaxes muscles and helps relieve muscle spasms.

INDICATIONS

Vary with temperature.

PRECAUTIONS

Never turn on or off while an athlete is immersed.

TIME

10 to 20 minutes

ICE PACK

PHYSIOLOGICAL EFFECTS

Reduces circulation, reduces pressure on nerve endings resulting in less pain.

INDICATIONS

Acute conditions to control bleeding and reduce pain.

TECHNIQUES

Cover area with a cold, wet elastic wrap. Secure ice
pack with elastic wrap then elevate.

TIME

20 to 45 minutes with compression and elevation. Continue cold treatment for 24 to 72 hours. Apply cold pack after activity to post acute injuries.

PRECAUTIONS

Be sure there is something between ice and body part to avoid frostbite.

ICE MASSAGE

PHYSIOLOGICAL EFFECTS

Reduces circulation

INDICATION

Post acute injury, Ice massage alone or in conjunction with heat modalities such as hydrocollator.

TECHNIQUES

Freeze cup full of water

TIME

10 to 15 minutes

PRECAUTIONS

Keep ice moving so creates a massaging effect.

CONTRAST BATH

PHYSIOLOGICAL EFFECTS

Flushing effect, cold constricts vessels then hot dilates vessels. Creates relaxing feeling
INDICATION
Post acute injury

TECHNIQUES
Warm whirlpool 106 degrees, Cold whirlpool 40 to 50 degrees.

TIME
Alternate cold and heat treatments, beginning and ending with cold. (3 minutes cold 2 minutes hot)

PRECAUTIONS
Watch for swelling in hot water.

ELECTRICAL STIMULATION

PHYSIOLOGICAL EFFECTS
Stimulation of muscle fibers, increased circulation and muscle contraction.

INDICATIONS
Reeducation, fatigue, spasms and muscle contraction.

TECHNIQUES
Moisten pads and place above and below area of pain
Make sure pads are secure.

TIME
10 to 20 minutes

PRECAUTIONS
Do not use on open wounds, incisions or when pace maker is present.
INTERMITTENT COMPRESSION PUMP

PURPOSES AND EFFECTS

External pressure, when applied to an edematous extremity, will help to return excess interstitial fluid to the lymphatic or venous circulation.

INDICATION

Traumatic edema

PRECAUTIONS

1. Acute inflammation or trauma
2. Infections
3. Presence of thrombi
4. Edema secondary to cardiac or kidney dysfunction
5. Obstructed lymphatic channels

TECHNIQUES

1. Check the patient’s skin integrity, pressure sensation, and measure the girth of the part to be treated. Determine the patient’s blood pressure.
2. Position the patient comfortably with the part to be treated in about 30 degrees elevation.
3. Apply the appliance and attach the rubber tubing.
4. Increase the pressure to the patient’s tolerance. DO NOT EXCEED THE DIASTOLIC BLOOD PRESSURE. The patient should feel no pain, tingling, numbness or pulse during the treatment. Generally keep pressures at less than 50mm for the upper extremity and 60mm for the lower extremity.
5. During the exhaust cycle, the patient should be encouraged to exercise his fingers or toes.

6. The minimum treatment should be two hours out of every 24 hours.

7. Remove the appliance hourly to check the skin and allow some exercise.

8. To retain the reduction wrap the part with an elastic bandages.

FREQUENCY

The pump should be used daily or twice daily until maximum reduction of edema is achieved, in approximately 3 to 4 weeks. Girth measurements, before and after treatment, should be performed until no further change is detected.
FLEXIBILITY RECOMMENDATION

1. Conduct light jogging or calisthenics before stretching.
2. Stretching does not complete a warm-up. Transition to light activities before full speed drills.
3. Avoid use of ballistics in stretching.
4. Static stretching should be held in each position 20 to 30 seconds.
5. Never stretch to the point of pain.
6. PNF stretching may be used as a pre-practice tool, while passive or static stretching may be used for post practice.
7. Partner stretching requires communication.
8. Encourage a non-emotional atmosphere for stretch drill.
ARCH - SHIN SPLINTS (Giek, McCue, 1987)

1. Point toes downward as far as possible then point toes upward as far as possible. Do while keeping foot as flat as possible on the floor, toes projecting over an "edge".

2. Spread toes as wide apart as possible using your hands to assist if necessary.

3. While sitting, weight on outside of feet, soles facing; make a "fist" with your toes.

4. While sitting, right foot resting on heel; make a slow inward or clockwise circle; inward or counter clockwise circle for the left foot.

5. While sitting, place your feet on a towel in front of you. curl your toes and slowly draw the towel toward you. Use a weight on the towel for resistance.

6. Pick up marbles and pencils from the floor.

7. Standing, raise as high as possible on your toes and back down.

8. Turn ankle in against resistance (manual, bike tubing) To massage and relieve a tired and sometimes painful arch roll your arch back and forth over a pop bottle, baseball bat, or golf ball.
KNEE REHABILITATION

These exercises are specifically designed to rehabilitate the muscles of the lower extremity in cases where knee problems have resulted in weakness. All of the exercises can be performed easily and simply when done correctly. These exercises are used as the first step to rehabilitate both competitive athletes as well as non-athletes. There are some general "do's" and "don'ts" which are a matter of common sense.

The important thing is that any muscle weakness demonstrated by the athlete requires months of intensive daily exercise for rehabilitation. Muscle weakness and atrophy can occur in just a few weeks, but it may take months to regain strength. There must be a time set apart each day to perform the exercises. Occasional performance of exercises will not be of benefit.

An exercise program should not cause pain or swelling in the knee. This usually occurs when too much activity has been done too soon. If this continually occurs, it means a repeat examination is necessary. An exercise program must be built gradually, start slow and watch for signs of over activity.

QUADRICEP SET

Sit on a flat surface with legs out straight. Tighten the knee without moving the leg out of position. Relax and repeat slowly, ease into the contraction for 2 seconds, hold
for 6 seconds, and ease out of the contraction for 2 seconds.

Repeat 3 sets of 10 reps.

HIP EXERCISES

STRAIGHT LEG RAISES

Lie on your back with your injured leg straight and your uninjured knee flexed about 30 degrees. Raise the injured leg and slowly lower the leg to the table, keeping the knee straight. Do 3 sets of 10 reps. Gradually begin adding ankle weights about one-half pound at a time.

HIP EXTENSION

Lie on the stomach, raise straight leg off of the table then lower. Repeat for 3 sets of 10 reps and add ankle weights as they progress.

HIP ADDUCTION

Lie on back, raise injured leg twelve inches and across the uninjured leg.

HIP ABDUCTION

Lie on back, raise injured leg six inches and move it away from uninjured leg.

TOE RAISES

Standing with both heels off the edge of a step or board, slowly raise up, bringing your heels off the ground, onto your toes. Hold this position for three seconds, then slowly return to starting position.
RANGE OF MOTION EXERCISES

KNEE FLEXION
Lying on your back, raise the leg straight upward supporting the lower thigh just above the knee with the hands clasped in back of the knee. Relax the quadriceps and let the weight of the leg bend the knee; then, with no additional aid straighten the knee to its previous position.

Sit on a high table with legs dangling. Place uninjured leg in front of the injured leg. With light pressure, give pressure to injured leg trying to flex the knee.

LEG EXTENSION
Lying on table, place a four inch lift under the heel. With light pressure being placed downward on the knee, try to fully extend the injured knee joint.

PROGRESSIVE RESISTIVE EXERCISE

LEG EXTENSION
Sit on a high table with leg dangling. Suspend weights from your ankle. Lift the weight upward, fully extending the knee and hold the load momentarily. Then slowly lower the leg until the knee is again bent 90 degrees. You may want to put a wedge or rolled up towel under the knee.

Universal leg Machine Leg Extension
Orthotron
LEG FLEXION

Lie face down on table with resistance on heel, flex leg towards buttocks.

Universal Machine Leg Flexion

Orthotron

TOE RAISES

BICYCLE

ENDURANCE RUNNING

SKIPPING ROPE

CUTTING AND FIGURE EIGHTS

RUNNING PROGRESSION

Jog 50 yds, walk 50 yds: Start 10 reps: goal 20 reps
Jog 75 yds, Walk 25 yds: Start 10 reps: goal 20 reps
Jog 100 yds, start 10 reps: goal 20 reps
1/2 Speed 100 yds sprint: start 10 reps goal 20 reps
3/4 speed running 75 yds: start 10 reps goal 20 reps
Full speed 40 yds sprint: start 10 reps goal 20 reps
Figure 8 pattern running.

Stops and starts.

Zig-Zag running.

Cuts 1/4 speed, 1/2 speed, then full speed.
SHOULDER REHABILITATION PROGRAM

BEGINNING EXERCISES

RANGE OF MOTION EXERCISES

Forward flexor - Keeping the elbow straight and stiff, raise the arm forward and then return to starting position. (3 sets of 15 reps. Minimum of 3 times daily)

Lateral (sideward) raises - Keeping the elbow straight and stiff, raise the arm sideways (laterally) from the body and then return to starting position. (3 sets of 15 reps. Minimum of 3 times daily)

Posterior (backward) Raises - Keeping the elbow straight and stiff, raise the arm backward and then return to starting position. (3 sets of 15 reps. Minimum of 3 times daily)

Rotation - Keeping the elbow tight to the side of the body and then rotate the arm externally and internally. (3 sets of 15 reps. Minimum of 3 times daily)

APE DRILL

Perform these exercises before a mirror so that your can make sure you don’t lean the body forward or sideways.

Clockwise Circles - Keeping the trunk bent forward at a 90 degree angle, allow the shoulder to relax and slowly swing the arm in a clockwise circular pendulum motion.

Counterclockwise Circles - Same position as above, except swing the arm in a counterclockwise motion.

Backward and Forward Swings - Same position as above
except for swinging the arm forwards and backwards along the side of the body in a Pendulum motion.

**Sideward Swings** - Same positioning as above except for swinging arm out sideways from the body and back towards the body in a pendulum motion in front of the body.

ALL THESE EXERCISES SHOULD BE PERFORMED 3 SETS OF 15 REPS A MINIMUM OF 3 TIMES DAILY.

**WALL CLIMB**

**Sideward wall climb** - Injured side to the wall. Arm bent, walk arm up wall as high as the shoulder will permit by alternately moving the forefinger and middle finger. Lower arm in the same manner. (3 sets of 10 reps. Minimum of 3 times daily)

**Forward wall climb** - Same as sideward wall climb except the patient faces the wall.

**ISOMETRIC EXERCISES**

**Chair press** - Bend knees so arms are perpendicular to the back of a chair. Grasp the back of the chair and press inward for 6 seconds. Repeat 4 more times.

**Doorway Press** - Stand in a standard, one door doorway with elbows kept straight. Press outward for 6 seconds. Repeat 4 or more times.

**Table Press** - Stand erect. Grasp the corners of a table with arms straight and press inward for 6 seconds. Repeat 4 more times.
**Atlas resister** – Force fist into palm of opposite hand. Offer great resistance with the palm of the opposite hand for 6 seconds. Repeat 4 more times.

**Chain breaker** – Resistive exercises in which you make believe you are breaking a chain across your chest, by clasping your hands together then you will begin attempting to pull them apart for 6 seconds. Repeat 4 more times.

**SHOULDER SHRUG**

Shrug shoulder up, back, down and forward in a rotary motion. (3 sets of 15 reps a minimum of 3 times daily.)

**BENCH EXERCISE**

Perform these only when able to raise arm to shoulder level.

**Supine Arm Raise** – Lying on bench on your back with arm extended to the side at shoulder level, raise arm to perpendicular position above the body, then lower to starting position. (3 sets of 15 reps)

**Prone Arm Raise** – Lying on bench on your stomach with arm extended to the side at shoulder level, raise and lower arm slowly holding at 90 degree angle to the body. (3 sets of 15 reps)

**INTERMEDIATE EXERCISES**

To be performed only when you can obtain full range of motion in every possible shoulder motion.
**Push-ups** - Start with kneeling push-ups and progress to regular push-ups with back straight. Start with 10 reps and progress to 25 to 30 reps 3 times daily.

**Body support** - Support your body weight between arms of a sturdy chair, the backs of two sturdy chairs, or parallel bars for 6 seconds. Repeat nine more times, 3 times daily.

**Ape Drill with a Weighted end Dumbell** - Perform same exercise as in Ape Drill except use a dumbell with 2 pounds of weight on one end.

When you can do 5 sets of 10 reps in each of the lifting patterns, increase the weight 5 pounds and start the exercises over again.
REHABILITATION OF ELBOW, FOREARM, WRIST AND HAND INJURIES

GOALS

Develop full range of motion

Restore strength and flexibility to surrounding muscle groups

ELBOW REHABILITATION EXERCISES

Passive stretching

Rubber tubing in all ranges of motion. 3 sets of 10 reps increasing in tube strength.

Build up to progressive resistive exercise program, with flexion, extension, supination, and pronation.

FOREARM, WRIST AND HAND REHABILITATIVE EXERCISE

Grip strength

Wrist curls

Towel squeeze

Ball squeeze

3 sets of 10 reps, 2 times daily.
TURF TOE (Physician and Sports Medicine, 1988)

Start by doing each exercise ten times. Increase repetitions by five each day, up to a total of 30 repetitions.

PULLING EXERCISES

Sit on floor with legs straight out in front. Place a towel around ball of foot. Grasp both ends of towel with hands, pulling foot toward knee. Stretch to the count of five then release.

Same as above, except pull more with right hand to bring foot to right, then pull with left hand to bring foot to left.

Repeat both with knee bent about 30 degrees.

FLEXING EXERCISES

Sit on floor with legs straight out in front. Flex foot upward toward face, curling toes under at the same time. The sequence is foot up, toes down, foot down, toes up.

Sit on floor with legs straight out in front, placing both heel and ball of foot flat against a wall flex toes toward face. Hold to count of five then relax.

Repeat both with knee bent 30 degrees.

SLIDING EXERCISES

Sit in chair with knee bent and foot flat on floor under knee. Keeping heel and ball of foot on floor, raise toes. Keeping toes up, slide foot back a few inches, relax toes.
Then raise toes again and slide foot back a few more inches. Keep raising the toes and sliding foot back until you can no longer keep heel on floor while raising the toes.

From starting position, slide foot forward as far as you can keeping both toes and heel in contact with floor. Keeping heel on floor and the knee straight, flex foot up toward knee. Then point foot, pressing toes on floor.

Repeat exercise above except keep toes curled as you stretch and point foot.

From starting position, claw the toes, inching foot forward as toes claw, then release. Separate toes between clawing. Inch out as far as possible, then slide back and start again.

PRESSING EXERCISE

Sit in chair with knee bent and foot flat on floor under knee. Raise heel, keeping toes flat on floor, then press down again. Leaning upperbody allows for greater stretch.

ROLLING EXERCISES

Sit in chair with knee bent and foot flat on the floor under knee. Turn inside edge of foot toward face (supinate), keeping outside edge on the floor. Hold to count of five. Do not let knee move during this exercise.

From starting position, raise big toe, then next toe, progressing to little toe. Reverse, going from little toe to big toe.
From starting position, slightly lift heel, putting weight on lateral borders of foot. Roll from little toe to big toe, then back toward heel without letting the heel touch the floor. You are making a complete circle around the ball of foot. Repeat and reverse.
ANKLE REHABILITATION

RANGE OF MOTION

Flexion - Flex foot as far as possible, point toes upward.

Extension - Extend foot as far as possible, point toes down.

Inversion - Turn soles of feet inward.

Eversion - Turn soles of feet outward.

IF THE ABOVE EXERCISES CAN BE DONE BEGIN THE FOLLOWING:

Foot circles - Foot circumscribes a small circle. Ball of foot down first, then in, up, and out.

Alphabet - Sitting on table with knee straight and only ankle extended over the end of table, print alphabet first in capital letters then in small, using your toes to draw each letter.

Wobble board - 30 times clockwise the counterclockwise

Balance board - 3 minutes in one direction and 3 minutes in the other direction

ONCE THE ABOVE CAN BE DONE PAIN FREE, BEGIN:

Towel exercises - Sitting on a chair with foot on a towel pull towel up under foot with toes. After completing the above part successfully, place a weight on the other end of the towel to offer resistance.

Pick-up Exercise - Pick up marbles, a small piece of
sponge rubber, or partly used gauze roller bandage. Alternate placing the object in the hand opposite knee of good leg and in the hand behind buttocks of injured leg.

Toe Raises - Stand with feet one foot apart and toe in. Rise on toes as high as possible without pain. Also, repeat this exercise with toes pointed straight ahead and pointed out.

Slant board - stretch achilles 30 seconds several times on the slant board.

UPON PAIN FREE COMPLETION OF THE ABOVE BEGIN

Repeat range of motion exercises with the trainer giving resistance to the exercises with his/her hand or use graded elastic tubing.

AFTER ATHLETE HAS PROGRESSED THROUGH THE TUBING LEVELS BEGIN THE RUNNING PROGRESSION EXERCISES LISTED IN REHABILITATION OF THE KNEE.
CRUTCH FITTING

Adjust the overall length so that the shoulder portion of the crutch is approximately 1 to 1 1/2 inches or about 2 to 3 fingers width below the arm pits of the patient while he or she is standing erect.

Adjust the handgrip portion so that the elbow is bent approximately 30 degree. Place the handgrip so that it is approximately even with the top of the patient’s hip line.
TAPING
ARCH SUPPORT TAPING PROCEDURE

Spray the area with adhesive, put a heel pad on the lower part of the heel and secure with a light coat of underwrap.

Place an anchor strip just in front of the metatarsal head, taking care not to pull too tight.

Begin medially, run the tape along the side of the foot, across the back of the heel and finally up and diagonally across the arch to the starting point. Repeat. SEE FIGURE 1

Begin at the middle of the anchor, run the tape diagonally downward, across the back of the heel and diagonally upward returning to the starting point. Repeat. SEE FIGURE 2

Begin laterally, run the tape down the side of the foot, across the back of the heel and diagonally upward across the arch returning to the starting point. Repeat. SEE FIGURE 3

Close the taping procedure by overlapping circular strips around the anterior portion of the foot. Take care not to get them too tight.
ARCH TAPING PROCEDURE

FIGURE 1

FIGURE 2

FIGURE 3

FIGURE 4
OPEN BASKETWEAVE TAPE PROCEDURE

Spray the area with the adhesive, put on a heel pad, and cover the area with underwrap.

Apply a foam horseshoe over both malleoli. Anchor the tape to the skin, being sure that the strips do not meet in front. Begin the stirrup one half the width down on the anchor. SEE FIGURE 1.

Anchor the stirrup at the top, dropping down one half the width of previous anchor. The next two stirrups should begin one half the width of the previous stirrup to the posterior. Each stirrup has a corresponding anchor at the top. SEE FIGURE 2 AND 3.

Once the horizontal anchor strips have reached the heel conclude the job by continually overlapping strips down to the toes. The finished product should appear as if a regular tape job has been cut off directly down the front, shrunk and put on the foot. Thus leaving a gap down the front of the leg onto the foot.
OPEN BASKET WEAVE TAPING PROCEDURE

FIGURE 1

FIGURE 2

FIGURE 3

FIGURE 4
ANKLE TAPING PROCEDURE

Athlete holds foot at a 90 degree angle in slight eversion. Spray the area with adhesive, place heel and lace pads on the foot, and cover the area with underwrap. Apply two anchor strips. SEE FIGURE 1

Apply three stirrups with corresponding "C" strips. Pull on the lateral aspect of the stirrup for inversion prevention and up on the medial aspect for eversion protection. Fan the stirrups at the anchor. Overlap the "C" strips by one half the width of the tape. SEE FIGURES 1 & 2

Apply the heel locks, beginning from the outside, across the instep, under the foot and across the heel, and return to the starting point. Repeat in the opposite direction. Then do another set of heel locks. SEE FIGURES 3 & 4.

Apply two figure of eights, beginning from the cut side and pull up on the arch. SEE FIGURE 5

Close the tape job by using overlapping circular strips. Begin at the anchors and work your way down to the mid arch. SEE FIGURE 6

Check for overall neatness, wrinkles and gaps.
ANKLE TAPING PROCEDURE

FIGURE 1

FIGURE 2

FIGURE 3

FIGURE 4

FIGURE 5

FIGURE 6
FIRST AID/MEDICATIONS
ONE RESCUE CPR ADULT VICTIM (American Red Cross, 1988)

ASSESSMENT/AIRWAY

Determine Unresponsiveness
Tap or gently shake shoulder
Shout "Are You Okay?"

SITUATION: victim is unresponsive

Call for help
Use head-tilt/chin-lift to open airway
One hand on forehead
Fingertips under bony part of jaw near chin
Tilt head without closing the mouth

Check Breathing
Maintain open airway
Ear over mouth
Look at chest, listen and feel for breathing (3 - 5 sec.)

SITUATION: VICTIM IS NOT BREATHING

BREATHING

Give Two Full Slow Breaths
Maintain open airway
Seal mouth and nose
Ventilate 2 times at a 1 to 1.5 sec per inflation
Observe chest rise
Allow for chest deflation after each breath

CIRCULATION

Check pulse
Maintain open airway
Locate Adam's apple
Slide fingers to groove on the same side of neck as rescuer
Feel carotid pulse for 5 to 10 seconds.
Head in position to check breathing

SITUATION VICTIM DOES NOT HAVE A PULSE

Activate EMS system
Direct someone to call the ambulance

BEGIN CPR

Assume correct hand position
Rescuer kneels by victim's shoulders
Find substernal notch
Measure up one finger width above notch
Place heel of other hand on sternum
Place second hand on top of first
Keep fingertips off chest
Apply correct compression
Keep shoulders over sternum
Keep elbows straight
Compress 1 1/2 to 2 inches
Apply smooth compressions and release
Maintain proper hand position
Compression rate: 80 to 100/min
Keep hands on sternum during upstroke
Count out loud
Provide proper ventilations
Maintain open airway
Seal mouth and nose
Give 2 full slow breaths after 15 compressions
Complete breaths and return to compressions
Continue CPR for one minute
Complete 4 cycles of 15 compressions and 2 ventilations

REASSESSMENT
Recheck pulse
Maintain open airway
Locate carotid pulse
Feel for 5 seconds
Head in position to check breathing

SITUATION:  VICTIM STILL HAS NO PULSE
Continue CPR
Ventilate 2 times
Maintain open airway
Seal mouth and nose properly
Give 2 full slow breaths
Resume Compressions and Ventilations
Locate proper hand position
Continue compressions at rate of 90 to 100/min
Maintain cycles of 15 compressions and 2 ventilations
Reassess pulse every few minutes
HEAT PROSTRATION (West Virginia University, 1987)

HEAT EXHAUSTION

Quite common and less serious

CAUSE

Hot, humid weather; working in tight heavy clothing; heavy exercise; poor physical condition; overwork; lack of salt and water.

SIGNS/SYMPTOMS

Sweating profusely, may turn to cold clammy sweat, temperature is normal or slightly elevated, faint feeling, pale face with a weak rapid pulse, shallow breathing, nausea, headache, exhaustion, collapse and loss of consciousness.

TREATMENT

Treat for shock, place in a well ventilated room, remove clothing, use an electric fan to cool the patient. Give the patient a saline solution if available. Place the patient in a shower, clothes and all or sponge off with cold water. Massage extremities lightly.

PREVENTION

Be sure that athletes have an adequate intake of salt and water, and give enough time for acclimatization to occur.

HEAT STROKE

Less common and quite serious

CAUSE
Hot, humid weather; physical exertion; lack of salt and water, direct sun rays and the use of alcohol.

RECOGNITION

There is no sweating and the skin is hot and dry. The patient's temperature is 106 to 112 degrees. Chest pains may be present, skin flushed and grayish, and a strong, rapid pulse is felt. There will be labored breathing, nausea, headache, exhaustion, collapse, convulsions and loss of consciousness. The pupils contract first and then will later dilate.

TREATMENT

Call or take the patient to a doctor immediately. Cool the individual the best way possible either put in a bathtub full of ice until temperature drops to 100 degrees, wrap in a wet sheet and sit in front of a fan, or sit in a chair in a cold shower. Keep the individual in a semi-reclining position, complete reclining may be hard on heart.

PREVENTION

Adapt activities to the environment and educate those supervising activities conducted in the heat to the importance of water and breaks. Screen participants with past history of heat illness and monitor their conditions more closely. Always see that there is an adequate intake of salt and water.
BLISTER CARE (Anrheim, 1989)

INTACT BLISTER

Leave the blister intact for the first 24 hours. Often during that time many of the symptoms will lessen.

If the blister is large and in a place on the skin that will be continually irritated, clean it thoroughly with antiseptic soap.

With a sterile scalpel, cut a small incision 1/8 to 1/4 inch long in the blister along the periphery of the raised tissue. The hole should be large enough so that it will not become clogged.

Disperse the fluid by applying a pressure pad keeping the pad in place to prevent refilling.

Clean the area with an antiseptic, and place a doughnut around to prevent irritation. You may also fill the blister with zinc oxide to aid in drying.

Monitor the blister daily for signs of infection.
Clean and replace dressing daily and after practice.

When the tenderness is completely gone, denude the area; however do not remove skin if any tenderness persists.

OPEN BLISTER

Keep the open blister clean to avoid infection. In the beginning of management, carefully and thoroughly wash with soap and water. Apply an antiseptic dressing.
Lay the flap of skin back over the treated tissue; then apply a sterile dressing and doughnut pad.

Monitor the open blister daily for signs of infection.

**DENUDED BLISTER**

If the blister is torn 1/2 inch or more, completely remove the flap of skin.

Completely clean the exposed tissue with soap and water. Apply an antiseptic liquid.

If the athlete has completed his activity, apply the "second skin" dressing to the raw area. Pad with a doughnut.
GENERAL PHARMACEUTICAL CLASSIFICATIONS (Arnheim, 1988)

ANALGESICS OR ANODYNES - pain relieving drugs.

ANESTHETICS - agents that produce local or general insensibility to touch, pain, or stimulation.

ANTACIDS - substances that neutralize acidity, commonly used in the digestive tract.

ANTICOAGULANTS - agents that prevent coagulation of blood.

ANTIDOTES - substances that prevent or counteract the action of a poison.

ANTIPRURITICS - agents that relieve itching.

ANTISEPTICS - agents that kill bacteria or inhibit their growth and can be applied to living tissue.

ANTISPASMODICS - agents that relieve muscle spasms.

ANTITUSSIVES - agents that inhibit or prevent coughing.

ASTRINGENTS - agents that cause contraction or puckering action.

BACTERIOSTATIC AND FUNGISTATICS - agents that retard or inhibit the growth of bacteria or fungi.

CARMINATIVES - agents that relieve flatulence in the GI tract.

CATHARTICS - agents used to evacuate substances from the bowels, active purgatives.

CAUSTICS - burning agents capable of destroying living
tissue.

COUNTERIRRITANTS - agents applied locally to produce an inflammatory reaction for the relief of a deeper inflammation.

DEPRESSANTS - agents that diminish body functions or nerve activity.

DISINFECTANTS - agents that kill or inhibit the growth of microorganisms; should be applied only to nonliving materials.

DIURETICS - agents that increase the secretion of urine.

EMETICS - agents that cause vomiting.

HEMOSTATICS - substances that either slow down or stop bleeding or hemorrhage.

IRRITANTS - agents that cause irritation.

NARCOTICS - drugs that produce narcosis or complete insensibility.

SEDATIVES - agents that quiet body activity.

SKELETAL MUSCLE RELAXANTS - drugs that decrease neural activity within skeletal muscle.

STIMULANTS - agents that temporarily increase functional activity.

Vasoconstrictors AND Vasodilators - drugs that respectively constrict or dilate blood vessels.
<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>INGREDIENTS</th>
<th>BRAND</th>
</tr>
</thead>
<tbody>
<tr>
<td>GI upset</td>
<td>Aluminum &amp; magnesium in liquid suspension</td>
<td>Maalox</td>
</tr>
<tr>
<td>Constipation</td>
<td>Food roughage</td>
<td>Metamucil or Mucilose</td>
</tr>
<tr>
<td>Skin wounds</td>
<td>Bactericide</td>
<td>Achromycin, Terramycin</td>
</tr>
<tr>
<td>Insect bite or sting, Athletes</td>
<td>Antipruritic, Tolfenil, undecylenic acid, and zinc undecylenic</td>
<td>Alcohol, calamine lotion, anti-taftate, Desenex</td>
</tr>
<tr>
<td>Jock itch</td>
<td>Drying agent</td>
<td>Corn starch, Zeasorb powder, talcum powder</td>
</tr>
<tr>
<td>Pain</td>
<td>Nerve inhibitor, counter irritants, Acetylsalicylic acid</td>
<td>cold producers, balms, liniments, aspirins</td>
</tr>
<tr>
<td>Inhibition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cold or allergy</td>
<td>Decongestants, chlortrimeton</td>
<td>Sudafed, Neo-Syneprine</td>
</tr>
</tbody>
</table>
NUTRITIONAL INFORMATION

What an athlete eats and drinks has a dramatic effect on their performance. Carbohydrates are the body’s natural source of energy, but there are different types of carbohydrates, some less nutritional than others. To eat, or what to eat is always a difficult question. In order to prevent some of the confusion here are some very basic guidelines to aid in food choices.

<table>
<thead>
<tr>
<th>WHAT TO EAT</th>
<th>% OF TOTAL INTAKE</th>
<th>WHAT TO AVOID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complex CHO</td>
<td>50 to 60 %</td>
<td>Candy bar, soda, quick energy sources</td>
</tr>
<tr>
<td>breads, cereals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>fruits, veggies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PROTEIN</td>
<td>12 to 15 %</td>
<td>Fatty meats, excess skins and breadcrings</td>
</tr>
<tr>
<td>Chicken, fish,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>turkey, lean beef</td>
<td></td>
<td></td>
</tr>
<tr>
<td>and pork</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FATS</td>
<td>less than 30 %</td>
<td>Fried foods, butter, sauces or gravies</td>
</tr>
<tr>
<td>Low fat milk,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>and cheese</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Try to eat only when hungry and always make time for breakfast.

One serving of meat a day is usually adequate.

Fat has more than double the calories of protein and CHO.

Alcoholic beverages are high in calories and low in nutrition.

Fasting confuses the body, and may cause weight gain.
REFERENCES


APPENDICES
APPENDIX A

TELEPHONE LIST

STUDENT TRAINEES

Cheryl Barbour
9906 1 Foxridge
932 - 5921

Laura Corsey
Dutch Village
232 - 5956

Amy Costello
232 - 5906

Malia Craig
232 - 5156

Bobby Duvall
961 - 3534

Julie Gloudemans
232 - 4166

Dawn Hardison
232 - 1503

Graduate Assistants

Joey Plivelich
951 - 9487

Joe Witt
953 - 0064

TRAINERS

Edie Ferrell
Home: 552 - 7934
Office: 231 - 6410

Teressa Welton
Home: 552 - 0694
Office: 231 - 6936

Jimmy Lawrence
Home: 552 - 8766
Office: 231 - 5690

PHYSICIANS

Dr. Duane Lagan
Home: 951 - 1890
Office: 231 - 5953

Dr. Marc Siegel
Home: 552 - 9184
Office: 552 - 3601

EMERGENCY NUMBERS ONLY

Student Health
Montgomery Hospital
Rescue Squad
231 - 5444
951 - 1111
911

VA State Police
South West Virginia Poison Center
1-800-542-7336
1-703-981-7336
APPENDIX C

NATA APPLICATION

NATIONAL ATHLETIC TRAINERS' ASSOCIATION, INC.
1001 E. 4th • Greenville, NC 27834
Application for STUDENT Membership
Send the completed form to the National Office.
ALL INFORMATION EXCEPT SIGNATURES MUST BE TYPEWRITTEN

SECTION A

Ms. Mr. 
Name ___________________________ ___________________________ Tel. No. ______ / ________
Mrs. First Middle
Last
Permanent Home Address __________________________________________________________
Number Street
City State Zip

All communication from the NATA National Office will be sent to your permanent home address.

School Address ________________________________________________________________

Date of Birth ___________ Soc. Sec. No. ___________ Month Day Year

Give dates and membership class of any previous NATA membership __________________________

_________________________________________ Prev. Membership No. ________________

In brief the qualifications for STUDENT membership are:
1. Applicant must be currently enrolled in one or more courses for credit in an accredited college or university, and
2. Person must not have earned bachelor's degree at time of application, and
3. Applicant must currently be making progress toward fulfillment of the requirements for NATA Certification. This
   requirement may be satisfied by enrollment in at least one college course pertaining to athletic training and/or by
   doing supervised student athletic training work under a NATA Certified Athletic Trainer.

See accompanying information sheet for more details.

SECTION B

Verification of college/university enrollment:

I am currently enrolled as an UNDERGRADUATE student at:

_________________________________________ College or University

Expected Date of Graduation

SECTION C

If applicant is not working as a student athletic trainer under the supervision of a NATA Certified Athletic Trainer indicate
enrollment in at least one course (for credit) pertaining to athletic training.

Course Title Credit(s) Course Dates

Enclose verification from college registrar.

Signature of Applicant ___________________________
APPENDIX D
INJURY REPORT

VIRGINIA TECH PLAYER INJURY REPORT

NAME: __________________
SPORT: __________________

Time and Date of Injury: ___________ Reported: ___________
Place of Injury: __________________ Body Part Injured: ___________
Mechanism of Injury: __________________
Symptoms: __________________
Clinical Impression: __________________
Medical Diagnosis: __________________
Previous Related Injury: __________________
Immediate Treatment: __________________
Planned Treatment: __________________
Examined By: __________________ Date: ___________
APPENDIX F
FREE TIME REQUESTS

Name:

Semester/Year:

Local Address and Phone:

Home Address and Phone:

Social Security Number:

Year In School:

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APPENDIX G
DRUG TESTING PROGRAM

DRUG TESTING PROGRAM

As a condition of participation in intercollegiate athletics, all student athletes must undergo urinalysis drug testing.

The following is a description of how the testing program has been implemented.

1. At the beginning of the school year all student athletes will be required to attend a physical exam/drug orientation meeting. At this meeting the students will be scheduled for physical exams, given a copy of the drug program, listen to a presentation by the team physician on the drug program, and sign the drug consent form.

2. Team drug testing will begin shortly after the orientation has been completed. Team testing will be done weekly until all the teams have been tested. Teams with small squads will be grouped together with other teams so we will always test around eight (80) student athletes.

When a team is to be tested their coach will be given written notification at noon the day before testing. It is his responsibility to notify the student athletes. The list will be posted at designated areas in the coliseum. The testing will be conducted in room 106 Cassell Coliseum. Testing will be according to standard protocol. (See appendix).

3. After the team testing has been completed we will begin random testing. Three random groups have been selected.
   - Football 1-126
   - Men's Basketball 1-15
   - Women's Basketball 1-15
   - Non-Revenue 1-337

We established four groups to draw from so that we can be assured of selecting football and basketball players on each testing day.

The Virginia Tech Systems Development Center has given us a program from which we can select our randoms. We have access to this program on the computer in the office of the Academic Counselor.

We will select approximately twenty (20) students for the random test.

   - Football 5
   - Men's Basketball 2
   - Women's Basketball 2
   - Non-Revenue 12

When the selections are made the appropriate coaches will be notified by hand delivered memo or when necessary by phone. This notification will be by noon the day of the test.

The random testing will be held in room 111 Cassell Coliseum. The students are to report to the testing area between 6:00-7:30 PM. Samples will be collected according to the standard protocol. (see appendix). Samples will be collected no earlier than 6:00 PM and no one will be admitted after 7:30 PM.
Initially we will do the random test weekly and later switch to a bi-monthly schedule.

DISPOSITION OF POSITIVE RESULTS

The team physician receives results from the lab and follows up on any positive results:
1. Coach is notified.
2. Parents may be notified.
3. Team physician sets up counseling session at counseling service.
4. Number of sessions is determined by counseling service.
5. Because of medical legal implications counseling services will communicate with team physician.
6. Athlete will be re-tested for an indefinite period of time. The re-testing will be done with the random groups.

Presently we do the Industrial Panel Six Drug Screen. (IDPG)

- amphetamine
- cocaine
- barbiturates
- opiates
- PCP
- THC

As of September 1988 we have done 637 urine drug screens.
APPENDIX H

READING LIST


APPENDIX I

Chain of Command Guide

SEVERE BUT NOT LIFE THREATENING

1. Assessment
   a. A B C’s
   b. Obvious Abnormalities
   c. Vital Signs

2. Stabilize
   a. Emotionally
      1. Calm down
      2. Reassure
   b. Physically
      1. Bleeding
      2. Paralysis
      3. Splinting
   c. I. C. E. R.
   d. Contact Team Physician
      1. Office number
      2. Beeper number
   e. Hospital or Campus Medical Facilities
      1. Call ahead
      2. Transport if not a back or neck injury

LIFE THREATENING SITUATION

1. A. B. C. ‘s

2. Call rescue squad
3. Inform team doctor if possible
   a. Office number
   b. Beeper number
4. Monitor vital signs
5. Accompany athlete if possible
6. Call to notify trainer
   a. Office number
   b. Home number