

MEDICAL COMMISSION  
OF THE INTERNATIONAL  
BOXING ASSOCIATION  
(AIBA)

# MEDICAL HANDBOOK OF OLYMPIC STYLE BOXING

SEVENTH EDITION  
2009

Electronic adaptation

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***Editor's Note***

It is now 2008. The last revision of our AIBA Handbook was published in 2004. Already there have been enough changes to warrant up-dating the manual. It is felt that it is time to bring the policies in the manual into line with current practices.

This year also marks a major change for us with the establishment of the Boxing Academy. Dr. C. K. Wu, President of AIBA, has charged Dr. Charles Butler, Chairman of the Medical Commission of AIBA, and the members of the Medical Commission with the development of a Medical Curriculum to be used as a body of knowledge for ringside physicians. It is planned that this information will be available to all on-line and will serve as another source in addition to the Handbook.

With that in mind, the Handbook now represents a condensed version of what the AIBA Ringside Physician needs to know. With the Handbook now published on-line, it is meant to be a work in progress which can change as rules and policies change. As changes occur, they can be announced on-line and the information disseminated in a more timely fashion.

Many thanks to all of those who, through their previous editions, have laid the groundwork for this revision.

Robin I. Goodfellow, M.D.

***Foreword***

## Introduction

The Seventh Edition of the AIBA Medical Hand Book represents the collaborative thinking of the Members of the AIBA Medical Commission. This Hand Book attempts to apply safety and therapeutic concepts to Boxing that are in line with current Medical Practice.

We live in an age where the “John’s Hopkins Study”, Mark Porter’s Studies, Worldwide Statistical evidence compiled by Cantu, the comprehensive longitudinal studies of Bianco and Bucari, and the most recent IOC Injury Study have demonstrated that Olympic Style Boxing is a safe sport. All but those philosophically opposed with minds closed to scientific evidence may celebrate the “Gentleman’s Sport” that is open to young men and women of every country and race---that has enabled so many young athletes to improve their lives, their self-image and the living-conditions of their families.

The purpose of this Hand Book is to provide the best medical guidance to preserve the safety record of a sport boasting no higher rate of neurologic injury than in the normal non-boxing population and an overall injury rate lower than many non-contact sports. The Medical Commission has looked critically at what have been considered impediments to participation in the sport. We have tried to separate those restrictions which pose risk from restrictions which simply represent the limitations of an earlier time. In altering some of the orthopedic limitations, outside advice was sought from experts tasked with rehabilitating large numbers young soldiers with musculoskeletal injuries; similarly, we sought expert knowledge in other specialized areas. History itself has been a friend, teaching us what has worked well and safely through the years.

Any attempt to catalog every reason why an athlete may not box is doomed to failure by the first athlete who presents himself with an unnamed condition. This Medical Commission deals with disqualifying conditions in broad strokes to allow the Ringside Physician more discretion to exclude those athletes who are unsafe to participate in boxing competition. The language also protects the athlete by allowing more judgmental latitude to any physician appeals panel.

The Medical Commission expresses special thanks to Dr. Robin Goodfellow and many commission colleagues for compiling this work dedicated to opening Olympic Style Boxing to the World’s Children as a safe sport that builds physical conditioning, character, well-being and health.

*Charles F. Butler, M.D Ph.D.  
Chairman  
AIBA Medical Commission*

### ***The Medical Commission and the Medical Jury***

The Medical Commission of the International Boxing Association (AIBA) is composed of 15 qualified doctors of medicine who are appointed by the Executive Committee from among those proposed by their federations. The President of AIBA “appoints” and “removes” the Chair and Vice Chair of all commissions. Usually the Chair of a permanent commission will be a member of the Executive Committee and must be an expert in the field. The President of AIBA may attend all Commission meetings, but cannot vote. The Executive Director of AIBA may attend all meetings, but cannot vote. The Executive Director is responsible for the relationship of AIBA with its Commissions. The Chair of the Medical Commission sits on the Executive Committee.

At all AIBA-sanctioned competitions including, but not limited to, the Olympic Games, all World Championships, the World Cup Championships and the President’s Cup Championships, members function as the Medical Jury. Their task is to assist the referee in deciding whether a boxer is fit to continue and to provide an initial evaluation and first aid if a boxer sustains a serious injury or loses consciousness.

The Medical Commission is responsible for enforcing the doping regulations at these championships. A Medical Commission doctor, qualified in Doping Control, shall be present at the tests and shall ensure that the specimens are properly taken and handled.

Members of the Medical Commission or physicians appointed by them shall be present at the initial medical examinations and the examinations that take place each morning at international competitions. When necessary, they assist the medical officers from the individual countries and express their opinion on injuries the boxers have sustained in previous bouts. In such cases, the decision of the Medical Commission member is final.

The Medical Commission shall meet at least twice a year. Opinions on various questions and problems related to Olympic style boxing are exchanged. These meetings are often accompanied by highly informative medical symposia on various subjects. On the basis of these discussions, the Medical Commission submits recommendations and motions, in the interest of the physical and mental welfare of boxers, to the Executive Committee and the Congress.

Doctors working in the field of Olympic style boxing must always have up-to-date information and be in a position to provide information for others.

## ***Disqualifying Conditions***

The examining physician at the annual exam or an appointed medical commission member at a tournament may disqualify a boxer for any condition which would endanger that boxer, his opponent or the officials.

AIBA Medical Commission Guidelines for disqualifying conditions are “evidence of or disclosed history of the following conditions in an annual and/or pre-bout examination”:

Acute and chronic infections  
Severe blood dyscrasias  
Sickle cell disease  
History of Hepatitis B, Hepatitis C or HIV infection

Refractive and intraocular surgery, cataract, retinal detachment  
Myopia of more than -3.50 dioptries

Recorded visual acuity in each eye:  
    uncorrected worse than 20/200  
    corrected worse than 20/60

Exposed open infected skin lesions

Significant congenital or acquired cardiovascular and pulmonary abnormalities

Significant congenital or acquired musculoskeletal deficiencies that affect the ability to box

Unresolved post-concussion symptoms, which will need clearance from a neurologist

Significant psychiatric disturbances or drug abuse

Significant congenital or acquired intracranial mass lesions or bleeding

Any seizure activity within the last 3 years

Hepatomegaly, splenomegaly, ascites

Pregnancy

Uncontrolled diabetes mellitus or uncontrolled thyroid disease

## ***Medical Examinations***

### Initial Medical Examination

A boxer should undergo a thorough medical examination when he first joins a club. This may be performed by any licensed or registered medical doctor. The exam must be adequate to evaluate the boxer for any disqualifying conditions.

1. Family History. Determine health of family members, emphasis on the presence of inheritable diseases.
2. Past Medical History and Review of Systems. Attention should be paid to notable symptoms, abnormalities of the pupils, previous operations and deformities. Current medications and allergies should be noted. In female boxers a menstrual history should be obtained.
3. Biometrics. Height and weight, looking for disparities.
4. Urinalysis to include at least sugar and protein.
5. Complete Clinical Exam:
  - Vital signs.
  - General appearance – looking for deformities, general well-being, signs of Marfan’s syndrome.
  - Eyes – including fundoscopic exam and test of acuity such as the Snellen eye chart.
  - Ears, Nose and Throat – including otoscopic exam.
  - Cardiovascular Exam – attention should be paid to any cardiac abnormalities, especially tachycardia, dysrhythmia, systolic and diastolic murmurs or cardiac enlargement.
  - Respiratory system – looking for signs of acute or chronic infection or dyspnea.
  - Back and Chest – looking for deformities, tenderness, scars.
  - Abdomen – looking for hernias, masses, organ enlargement.
  - Genito-urinary system – a formal exam is generally not required. In a doctor’s office further evaluation is appropriate if a large hernia is suspected. Although a unilateral testis is not disqualifying in itself, it could prompt discussion; the same is true for one kidney or for breast implants.
  - Musculo-skeletal system – looking for congenital or acquired deformities, range of motion, joint stiffness or laxity, signs of inflammation.
6. Neurological Examination – includes exam of the cranial nerves, as well as evaluation for tremors, locomotor impairment, dysarthria, gait /balance/posture disorders, reflexes. Evaluation of mental status by observation or testing; likewise, for mental retardation and psychiatric disorders.

If the history or physical examination suggests the presence of a disqualifying condition or other problem that requires further evaluation for diagnosis, the doctor shall require the boxer to undergo the appropriate testing and/or referral. These could include, but are not limited to, blood work, ECG or stress ECG,



X-Rays, CT, MRI, ophthalmologic referral, etc. The physical exam and any test results shall be recorded in the manner prescribed by each federation.

We encourage the initial examining physician and examiners at pre-bout physicals to advise the boxer:

- only to compete when he is in good condition and has been training in order to reduce the risk of injuries
- not to compete or train when ill
- always have injuries treated
- always compete in a weight class which corresponds to his natural weight, since forced weight loss can damage the health and reduce physical performance
- always be honest with the doctor and to report any injuries, including head injuries sustained out of competition
- always abide by the rules and recommendations laid down to safeguard his health

#### Annual Medical Examination

A medical examination should be conducted annually by a medical doctor.

- update of the family history, past medical history, review of systems with special attention to any medical suspensions
- up-date of medications and allergies
- complete physical examination with vital signs
- biometrics (height and weight)
- neurological examination
- indicated tests

#### Medical Examination prior to an AIBA Boxing Tournament

- At the medical examination and weigh-in, the boxer shall produce the AIBA International Competition Record Book (the passbook) which contains the medical certificate. The initial Annual Examination and any annual up-dates, along with the determination of fitness to box, must be completed prior to appearing for the pre-bout exam. This is done by medical doctors. At a minimum, all changes from previous examinations should be recorded, as well as the determination of fitness to box. The boxing records must also accompany the boxer.

This evaluation is a good opportunity for the physician to circumvent injuries later on. The object of the pre-competition exam is to be sure the boxer is fully

capable of boxing that day. He should be questioned about any extraordinary head blows and be free of any post-concussion symptoms and have a normal neurological survey. He should not be ill with a febrile illness. Medications should be discussed with regard to potential doping violations.

The exam can be accomplished in a few minutes. Start with the above points. Visual inspection of the boxer's responses to these questions will verify orientation and level of conscious.

Inspection of the head, eyes, ears, nose and throat for injuries can also be performed with attention to cranial nerve function. Likewise with examination of the neck for motion and tenderness.

By checking on symmetry and tone of paracervical, shoulder, biceps, triceps, forearm muscles, interosseous and grip muscles, an adequate exam of the cervical nerves and coordination is made.

Examine the elbow, wrist and metacarpal joints. Have the boxer make a fist and palpate for possible metacarpal fractures or tendon injuries. Have him open the fist and recheck motion and for deformities.

Do a heart and lung exam and check for pain with rib compression.

Next perform the abdominal exam looking for organomegaly, masses or tenderness.

Finally, a demonstration of heel and toe walking and tandem walking checks for lower extremity strength, balance and lumbar/sacral nerve function.

Each physician can develop his own particular routine as long as it covers the same basic functions and can be done quickly and comfortably.

### ***Medical Responsibilities of the AIBA Ringside Physician***

Never before in the history of Olympic style boxing has so much emphasis been placed on the responsibility of the ringside physician. Prevention of injury in boxing is the responsibility of all involved. However, the physician has a unique role in prevention as well as treatment of acute injury. Even though Olympic style boxing is the most medically controlled and supervised sport, continued vigilance is necessary to maintain and improve the safety of our sport.

Olympic style boxers are trained to be highly skilled in their sport. These skills are also designed to prevent injury. Nonetheless, all exercise or sport activity bears a certain risk of injury. Athletes in all sports, no matter how skilled, are

subject to sudden injury. Coaches, professionals, officials and athletes accept that risk. Therefore, prevention is crucial and must be based on a sound medical plan to cover all aspects of the sport, the facility, equipment and the athlete. For the ringside physician, the best approach is to systematically and conscientiously prepare for the pre-competition phase, the ringside management and the post-bout examination responsibility.

### Pre-Competition

It is the responsibility of the Chair of the AIBA Medical Jury to go over the plans for the medical aspects of the tournament with a representative of the Organizing Committee, preferably the Chief Medical Officer. He should familiarize himself with the venue, including the placement of the Emergency Medical Technical Support Personnel, the First Aid room and the evacuation route to the ambulance.

### Pre-Competition Physical Examinations

On the day of the first weigh-ins and on subsequent days, assigned medical doctors need to be available to do pre-competition physical examinations. This is coordinated with the officials and done in conjunction with the weigh-ins. It is permitted that local doctors and physicians traveling with their teams assist with these physicals.

However, only the medical doctor in charge of the pre-competition physical examinations may declare a boxer unfit to box. If any of the other doctors present feel that a boxer is not fit, that boxer is to be referred to the doctor in charge.

Once a boxer has been declared unfit, the boxer with his passbook is taken to the responsible International Technical Official (ITO) for disqualification.

N.B. If an AIBA Medical Commission member is present, acting as a team physician, his duties are limited to those of a team physician. That is, he may not serve on the Medical Jury at ringside or in any other Jury capacity, unless specially credentialed to do so.

See the above description of the recommended pre-bout examination.

### Suggested list of items for the ringside physician

Obviously, with emergency medical technician (EMT) support and ambulance availability, little emergency equipment at ringside is necessary except for the following:

1. Stretcher available under the ring or immediately at ringside.
2. Oxygen tank (make sure it is functional and full) also stored under the ring or immediately available at ringside. Each jury member should know the exact location of this equipment for his ring and where the Emergency Medical Technicians are stationed.

The physician should also carry on his/her person or have laid out on the ringside table the following:

3. clean gauze sponges for wiping cuts and nosebleeds
4. a penlight for examining intraoral bleeding, nosebleeds, cuts and pupils
5. clean disposable gloves

Other useful items, including blood pressure cuff, stethoscope, hand sanitizer, otoscope, ophthalmoscope, tongue depressors and oral airways, are perfectly acceptable to have handy, but basically items one through five are the essential items to handle a stricken or injured boxer in a ring emergency.

#### Evaluation during the bout

The physician needs to be aware of the following requirements, although the responsibility of assuring the following is that of the referee and judges. However, the physician must be mindful and, in so doing, greatly help in the observance of AIBA rules by all.

#### Guidelines for entering the ring

The physician will enter the ring only when the referee requests the physician's evaluation of and/or aid for a dropped boxer or serious injury.

The physician may, at his own discretion, between rounds indicate to the referee or Competition Jury that he wants to examine a boxer. The referee or Competition Jury will then signal "stop" at the beginning of the next round and the boxer will be escorted to ringside for the physician's evaluation.

At his discretion the ringside physician may suspend the bout at anytime. If there is a risk of physical injury, he shall notify the Competition Jury to terminate the bout. The decision shall take precedence over all other considerations.

When entering the ring, the following advice is given:

1. Enter quickly, but calmly and with authority. Remember, everyone else in the ring is not sophisticated medically and tends to become overly excited.

2. Do not permit the boxer's corner personnel to dictate your evaluation, management or the time you take. They will be escorted to the corner by the referee should they enter the ring.
3. Make sure the boxer has an adequate airway. Remove the mouthpiece and watch for vomiting or aspiration.
4. Insist that the boxer lie down until fully reactive. Then permit him to sit up and, only when stable, may he be escorted to the corner with assistance.
5. When recovery permits, follow the steps mentioned elsewhere in this section to evaluate the boxer's neurological status. In this instance, the neurological evaluation is done to establish a baseline for further reference because the boxer will require observation.
6. When entering the ring, take clean gauze pads and a penlight, but have airways, emergency medical technical support and resuscitation equipment readily available.
7. The physician must examine the boxer after a period of unconsciousness or other serious injury. Therefore, facilities should be available for continued, close observations under the direct supervision of the ringside physician.
8. If rapid recovery is not as expected, expedite transfer via stretcher and ambulance to the prearranged referral hospital.
9. If recovery progresses satisfactorily, without evidence to suspect a progressive intracranial process, the boxer is released to the care of his coach, family or other responsible adults. This individual should be given a Head Injury Follow-Up Form. See Appendix IV for an example. Additional pertinent information should be provided to facilitate continued observation and to assure proper follow-up care.

#### How to handle cuts at ringside

Since the advent of the headguard, few cuts are seen. Nonetheless, the physician must be prepared to handle cuts at ringside. The basic principle of handling cuts around the eye is that, if a cut causes enough bleeding to impair vision, the bout should be stopped. Most cuts will NOT require that the bout be stopped.

Occasionally a cut will be in an area where deep structures may be injured. In boxing, as these are blunt injuries and not sharp injuries, it is still unusual to have to stop a bout unless these lacerations are quite deep and severe. However, the following lacerations should be evaluated with this in mind.

Generally most cuts, with the following exceptions, do not impair vision or damage underlying structures:

Cuts over the supraorbital nerve or the supratrochlear nerve, if they are deep enough, may damage the nerve.

Cuts medially over the lacrimal duct area may extend into the nasal lachrymal duct.

Cuts over the infraorbital nerve, if deep enough, could damage the nerve. Cuts on the eyelid itself could damage the tarsal plate or the globe itself may have been injured.

Consideration should be given to stopping the bout for cuts in the above specified areas.

Vertical cuts through the vermillion border of the lip should stop the bout because of the potential for further tearing of the lip from subsequent trauma.

Cuts around or on the bridge of the nose must be carefully checked for evidence of a compound nasal fracture. If no fracture is present, the bout may be allowed to continue.

The fairly common cuts on the lateral aspect of the eyebrow may usually be allowed to continue even when quite long.

No dressing of cuts is allowed except for collodion, skin glue or steri-strips. If it is obvious in a tournament that the cut will not pass a subsequent pre-competition exam, the bout should be stopped. Subcuticular closure of certain cuts with a covering of collodion may allow boxers to continue in a tournament. If they choose this approach, they should be made aware that there is a risk that the wound may re-open during the bout and need further repair.

See Appendix IV for illustration.

#### How to handle nosebleeds

The initial evaluation should determine the presence of a fracture. Gentle handling of a nose bleed is necessary so as not to further aggravate or compound a fracture. If no fracture is felt, the physician must then evaluate the character of the bleeding (i.e. venous vs. brisk arterial gushing). Determination of posterior bleeding should also be done by tongue depression and pen light observation. If there are clots in the posterior pharynx or the boxer is spitting clots, the bout should be stopped. Further head blows could cause aspiration of clot and a respiratory emergency. Nosebleeds should only be stopped for medical reasons. A messy nosebleed is not necessarily a serious nosebleed. Most nosebleeds will stop on their own or with external pressure. However, if the bleeding is arterial gushing, the bout may well need to be stopped.

#### Evaluation of the impaired boxer in the ring

A boxer temporarily stunned or knocked down and unconscious is a stricken boxer and a medical emergency. This indicates that a concussion has occurred.

A concussion is a temporarily altered state of motor hypotonus, helplessness and disturbed consciousness.

This includes any one or more of the following:

1. Disorientation
2. Memory deficit – antegrade and retrograde amnesia
3. Altered or slow speech
4. Difficulty processing new information
5. Impaired motor function – slow, uncoordinated

The following questions are helpful for evaluating the mental status of a boxer whose ability to protect himself is questioned (i.e. in the corner or when brought to ringside by referee):

- What is your name?
  - Where are you?
  - What day and year is it?
  - What is your opponent's name? What round is it?
  - Ask the boxer to repeat four numbers, i.e. 7-3-8-2.
6. Note speech – altered, slow or repetitive?
  7. Observe the eyes:
    - a. Pupils equal, reactive?
    - b. Is there spontaneous nystagmus? The presence of spontaneous horizontal nystagmus indicates that the boxer is very vulnerable and should definitely not be permitted to continue.
  8. Look for facial weakness, hemiparesis or other focal signs.

The match should be stopped for any of the following. If the boxer:

1. Was clearly stunned
2. Was unconscious
3. Fails to answer the questions correctly
4. Fails to perform the motor tests
5. Shows any abnormal focal signs

Certainly, much of the appraisal is subjective, but the conscientious application of these guidelines will produce decisions that minimize injury and protect the injured boxer.

### How to handle the unconscious boxer

A boxer knocked down and unconscious is considered a stricken boxer and emergency attention by the ringside physician is mandatory. The referee should immediately signal the doctor to enter the ring. A cervical (neck) fracture must always be a consideration in the initial evaluation. The physician needs to promptly secure the airway and check for signs of hand and foot movement that



will indicate an intact spinal cord. If the boxer fails to regain consciousness, make full use of supplemental oxygen, even if respiration seems adequate. Increasing oxygen concentration to the brain may prevent further injury. Continue airway management. With the help of the EMT service, immobilize the neck in a cervical collar and place the boxer on a stretcher. The boxer should then be removed expeditiously from the ring and transferred via ambulance to the designated hospital in full emergency mode.

If the boxer regains consciousness and demonstrates full use of his extremities, he may be allowed to sit up. Don't allow him to stand immediately. When satisfied that he has full use of his extremities, assist him in standing and move to the corner where he should sit down on the stool until fully capable of being assisted from the ring. Make sure he does not attempt to engage the ropes or maneuver down the ringside stairs unassisted. On returning to the locker room or designated examination area, the physician should perform a thorough medical examination to determine the need and nature of further medical observation and/or hospitalization.

If the boxer regains consciousness, but does not have full use of his extremities, with the help of the EMT service, he should be placed very carefully in a cervical collar, removed from the ring on a stretcher and transported to the designated hospital.

Remember an unconscious boxer is an emergency of the first magnitude.

### The Post-Bout Examination

Each boxer must be examined after the bout. Ideally there should be an examination area some distance away from the ring on the way to the locker room where the boxer can be stopped and briefly examined for mental status, head, neck or extremity injury. This can be done rapidly by asking questions as to mental orientation and status while a quick survey of head, face, neck and upper extremities is made. A focused exam is performed of any area suspected of possible injury that may have been noted during the bout. When there are two physicians at ringside, one should be designated to do the exams while the other remains at ringside. The task may be alternated at the doctors' discretion. If only one physician is at ringside, he must do the exams expeditiously and return to ringside as soon as possible so that the boxing may resume.

Sometimes it is more convenient to do the post-bout evaluations at the ringside. This is acceptable if there are no objections from the Competition Jury. In this case each of the two doctors may see one of the boxers, making the process faster. If a boxer is going to require further evaluation by the ringside doctor, he should at that point be taken to a separate area or to the locker room, if there is no other designated site. Always the boxer's safety is the primary concern.



## ***Minimal Suspension Periods after Knockout and RSCH***

### Single occurrence of knockout or RSCH (Referee Stops Contest–Head)

If a boxer suffers a knockout as a result of blows to the head or if the bout is stopped by the referee because the boxer has received heavy blows to the head, then the boxer may not take part in boxing or sparring for a period of at least 28 days afterward.

### Double occurrence of knockout or RSCH

If during a period of three months a boxer is twice knocked out or if two bouts are stopped by the referee due to the boxer having received heavy blows to the head or one of each, then the boxer may not take part in boxing or sparring for a period of three months after the second occurrence.

### Triple occurrence of knockout or RSCH

If during a period of 12 months the boxer suffers three knockouts or if three bouts are stopped by the referee due to the boxer having received heavy blows to the head, then he may not take part in boxing or sparring for a period of one year after the third occurrence. Any combination of knockouts or RSCHs that equal three under these circumstances qualifies for the one year suspension.

### Other

Any boxer who loses a difficult bout as a result of many blows to the head or who is knocked down in several successive competitions may be barred from taking part in boxing or sparring for a period of 28 days after the last contest on the advice of the Medical Jury.

All these protective regulations apply when the knockout or severe head trauma occurs in training as well.

### Medical certification after the end of the suspension period

Before a boxer is allowed to fight after the aforementioned periods have elapsed, he must be passed as fit by a neurologist, if possible after a specialist examination has been conducted and computerized tomography or MRI of the brain has been carried out.

## ***Boxing Injuries***

See above for the discussion of Nosebleeds.

See above for the discussion of Head Injuries.

Eyes. Serious eye injuries are very rare. Corneal abrasions, tearing of the iris and dislocation of the lens may occur. Some cases of retinal detachment have been observed. In the case of an eye injury, the bout must be stopped and the boxer is referred to an ophthalmologist.

Abrasions. Such injuries often occur to the face and skull and elsewhere. Bleeding should be halted by pressure, then cleaned and a local antiseptic applied.

Lacerations. There is no doubt that most cuts in the region of the eyes are caused by blows to the head. When the wound has been thoroughly cleaned, it can be stitched meticulously in layers. Smaller cuts can be held together at the edges and taped with a steri-strip or closed with skin glue. However, it is recommended that all facial cuts through the cutis be sutured with fine sutures in layers. If a wound is stitched, the stitches should be removed within five days. To guarantee healing of the wound, a sufficiently long suspension period should be imposed. Lacerations of the scalp may be closed with heavier sutures in a through-and-through fashion.

Hematomas. The “black eye”, as it is commonly known, rarely requires treatment, but cold applications and light compression limit the extravasation of blood.

Hematoma of the Auricle. This injury requires prompt incision and a pressure bandage with the application of topical antibiotics. If done late, this should be done by a doctor familiar with the condition.

Nose. Fractures of the nasal bones are rare. Reduction at an early stage is indicated and a suspension of three months should be imposed. The procedure may be done after the boxer has returned home and the swelling has subsided.

Septal Hematoma of the Nose. This should be drained on an emergency basis to prevent formation of a hole in the septum later. With the nose is packed, antibiotics and decongestants are used. This should be done by someone familiar with the procedure, but is not usually difficult.

Jaw. Fractures of the jaw are also rare. The symptoms are pain, tenderness, trismus and speech difficulties. The patient should be referred for repair. A six month suspension is usual.

Hands. The most common fractures are those of the first metacarpal. They are primarily caused by a poor punching technique, where the thumb is not correctly positioned opposite to the index and middle fingers. If such a fracture is suspected as indicated by localized tenderness, bruising or swelling, the boxer should be immediately sent for an X-ray. All suspected hand and wrist fractures should be splinted and sent for X-ray. Referral is made on the basis of these findings. Suspected dislocations are handled in the same fashion.

Limbs. Injuries of the upper and lower limb are uncommon in boxing. Shoulder dislocations are seen and are best relocated immediately in the ring before spasm sets in. A sling is of benefit, but the boxer needs referral when he returns home.

Abdomen. Ruptures of the organs in the abdomen (spleen, liver) are uncommon, but should be borne in mind due to their serious consequences. Pain in the abdomen and/or shoulder may signify bleeding.

Kidney Contusions. Contusions may lead to massive hematuria even when no anatomic defect appears. In most cases conservative treatment in hospital with confinement to bed should suffice.

### ***Physical Fitness of Referees and Judges***

The Medical Commission does not consider age to be an absolute factor in one's health and physical fitness. Therefore, the medical examination is designed for and recommended to be administered to referees and judges of all ages.

The examination shall consist of two parts. The annual examination is done at the local level by the National Federation. This shall be documented and presented to the Medical Jury in charge of any International, Continental or World competition. The referee/ judge will then be subjected to the second brief, but thorough, exam done prior to the event at the time of the official weigh-in. These exams shall consist of the following:

#### Annual Examination

This shall include a history of past and recent illnesses, surgical procedures, allergies, medications, disabilities and family history.

The following conditions render the R/J unfit:

1. coronary artery insufficiency, with angina
2. congestive heart failure
3. aortic stenosis
4. left ventricular outflow tract obstructive disease
5. aneurysm
6. myocarditis
7. active thrombophlebitis
8. uncontrolled arrhythmias
9. untreated or poorly controlled hypertension

10. uncontrolled metabolic disease (diabetes mellitus, thyrotoxicosis, myxedema)
11. excessive medication
12. renal, hepatic or other metabolic insufficiency
13. uncontrolled psychoneurotic disturbances requiring therapy
14. intermittent claudication
15. moderate to severe pulmonary disease
16. physical disability from neuromuscular, orthopedic or arthritic disorders
17. myopia (long distance vision with or without corrective lenses of less than 20/80 (British/ American), 2.5/10 (European) in both eyes. The wearing of glasses in the ring is prohibited, although the wearing of contact lenses is permitted.

The clinical examination must include the following:

1. Age, height, weight, and neurological review to include cranial nerve survey, deep tendon reflexes, Romberg and Babinski responses.
2. Blood pressure (uncontrolled hypertension is disqualifying).
3. Resting heart rate not to exceed 100 min.
4. Ophthalmologic exam: Visual acuity (Snellen chart) and fundoscopic exam.
5. Internationally standardized-graded exercise electrocardiogram (ECG), annually for those age 40 and above and every 3 years of those under 40.
6. Laboratory tests at the discretion of the examiner.

In addition to having the examination performed and documented, the referee and/or judge must produce the completed AIBA Medical Commission's Certificate of Examination, signed by his or her respective National Federation's Medical Office, certifying his or her physical fitness to officiate as a referee and/or judge.

#### Pre-Competition Examination

The second examination, done at each AIBA competition, prior to or at the time of the initial weigh-ins, shall include the following:

1. Blood pressure reading to rule-out uncontrolled hypertension.
2. Resting pulse rate between 50 and 100.
3. A normal auscultation of the chest.
5. A temperature to rule-out febrile illness.
6. Conditioning tests as determined and described by the examiner.

The members of the AIBA Medical Jury shall use their best judgment, taking into account all of the above in evaluating the total fitness of each individual referee/judge. The object being to diminish the risk of coronary heart disease and to promote the semblance of good health and conditioning of those officials in and about the ring during AIBA events.

## ***Medical Aspects of the Organization of International Tournaments***

From a medical point of view the organization of international boxing competitions can be divided into four stages:

### 1. Preliminary measures

The organizing committee consists of various commissions, including the Medical Commission. At this stage the Medical Commission of the Organizing Committee sets down the medical regulations for the competition.

### 2. Long-term preparation for the competition.

This stage begins with the implementation of a detailed plan.

The Medical Commission:

- arranges rooms for the meeting of the Medical Commission of AIBA if appropriate
- prepares a medical symposium if appropriate
- organizes medical care in the competition arena
- makes sure that the necessary medical documents are printed (cards for weighing-in and for doping protocols)
- arranges rooms for medical examinations with the appropriate equipment (couches, lockers, chairs and tables)
- finds a First Aid room in the arena (equipped with the requisite First Aid facilities as well as a direct telephone line). Two ambulances and medical personnel must also be available.
- finds a well equipped laboratory for doping controls
- finds at least two appropriately equipped rooms for carrying out doping controls
- makes sure that there are at least three seats in the arena for the Medical Jury and at least four for the Medical Commission of AIBA
- makes sure that adequate food supplies are available for the boxers

### 3. Immediate preparation for the competition. This stage covers the last five days prior to the tournament.

Particular attention should be paid to the following points:

- The general medical examination is carried out by the Medical Commission of AIBA or by the appropriate continental federation in cooperation with specialist doctors from the host country.
- The medical examinations must take place in a suitable room, meeting certain conditions, e.g.:

1. The competitors must have enough space.
  2. There must be adequate seating.
  3. The doctors must have good working conditions.
  4. There must be direct access to the weighing-in room.
  5. There must be heating (if necessary), sufficient light and good ventilation.
  6. There must be a sufficient number of chairs and desks.
- The examining doctors must know that they are to confirm their examination in the boxer's passbook, certifying his fitness to compete.
  - The members of the AIBA Medical Commission must be provided with transport.
  - It must be ensured that everything to do with feeding the boxers is arranged.
- The following should be taken care of:
1. The place where the boxers will receive their meals. (This should be the hotel in which they are staying.)
  2. The calorie content and nutritional composition (vitamins, minerals, protein, carbohydrate, fat) should meet generally recognized standards.
  3. The public health authorities must guarantee the maintenance of food hygiene regulations by the respective restaurants and by their staff.
- The preparations for doping tests should be examined to see that they comply fully with the requirements of the AIBA doping regulations.
  - The preparations for the medical symposium should be completed at this stage.

#### 4. The actual competition

Special attention should be paid to the following:

- medical examination of the boxers
- ambulances and the First Aid room in the arena
- unhindered execution of the doping tests and transport for the Doping Doctor
- feeding of the boxers
- hygiene in the hotel, training facilities and the arena

Proper seating arrangements must be made for the physicians directly at ringside. They must be at a neutral corner with direct access to the stairs. There must be a table that is adequate to seat all of the Medical Jury members assigned to that ring. See Appendix IV for AIBA Field of Play Diagrams.

## ***Licensing for Ringside Physicians***

### Level 1 License Requirements:

- ONE year's experience working as a doctor in amateur boxing
- Successful completion of Level 1 Doping Control examination, administered by two doctors from the Doping Control sub-commission
- Passing the SIMPLE Exam on the Core Knowledge Curriculum. ONE tournament monitored by a Level 2 doctor

### Level 2 License Requirements:

- Level 1 license
- THREE years' experience working as a doctor in amateur boxing
- Two weeks in the Boxing Academy, completing the Core Curriculum and passing the CERTIFICATION Examination

### AIBA Medical Commission License Requirements:

- Level 2 license
- Membership on the AIBA Medical Commission

This license will be kept in perpetuity except as the current members may be required to renew the license by examination.

Previous members will keep their International AIBA License except as they, like the current members, may be required to renew their license by examination.

## ***Antidoping Regulations and Issues***

AIBA conforms to the World Anti-Doping Agency (WADA) doping code. See the AIBA website for the AIBA Anti-Doping Rules. Also see the AIBA website for information on Therapeutic Use Exemption Forms. [www.aiba.org](http://www.aiba.org)

## ***Appendix I: AIBA Articles and Rules Concerning Medical Subjects***

### Medical Commission and Medical Jury

A. Composition. The Medical Commission shall be composed of its Chairman, one Vice-Chairman, one Secretary and fifteen members all of whom shall be qualified Doctors of Medicine, nominated by their Federations and appointed by the Executive Committee. In order that any doctor may be elected to hold such an office, he must first submit his curriculum vitae and then an application to the General Secretary.

B. Meetings. The Medical Commission shall arrange its own meetings (working group) at least twice each year. The Federations shall undertake to ensure the participation of their Commission members in the meetings. Those core and new members who do not attend meetings without a very strong reason will be excluded from the Commission.

C. Medical Jury. At all AIBA-sanctioned events including, but not limited to, all World Championships, the Olympic Games, the World Cup Championships and the President's Cup Championships, there shall be a Medical Jury made up of members of the Medical Commission. The number will depend on the number of rings, with a minimum of three. Continental Bureaux shall nominate similar Commissions for Continental Championships. The decisions of this Commission shall be final and without appeal. A member of the Medical Commission of AIBA may act as a member of the Medical Jury in any Championship under the auspices of AIBA.

D. Defense and Promotion of AIBA Boxing. The Medical Commission organizes scientific conferences and symposia on the medical aspects of boxing. Members of the Medical Commission take part in these events and publish articles in medical journals in the defense and promotion AIBA of boxing. The Medical Commission coordinates and initiates medical research projects for the better understanding of the physiological and medical aspects of boxing.

E. Duties. The Medical Commission shall make recommendations to the Executive Committee with regard to the physical well-being of AIBA boxers and shall collect information on medical matters relating to AIBA boxing.



## **Appendix II: Boxing Hygiene**

Sports hygiene is an important component of sports medicine. In this appendix we present a synopsis of boxing hygiene regulations for doctors, coaches and referees.

Long Hair. Hair may not extend more than 10 cm. below the headgear in the back. Long hair over the forehead limits vision and can cause injuries to the eyes. Hair must be controlled beneath the headgear so as not to fly loose.

Beards. Beards are a potential danger and are therefore prohibited. During clinches the beard can get into the opponent's eye and can cause corneal abrasions. Facial stubble is likewise dangerous and boxers must be clean shaven with no moustaches.

Dehydration. A reduction in fluid intake for the purposes of weight loss is dangerous to the health and reduces the boxer's performance. Dehydration can lead to liver and kidney damage and diminishes the boxer's aerobic capacity. Reduction in fluid intake and sweating before the bout are inadvisable and should be avoided.

Vaseline. The use of a small amount of Vaseline on the forehead and eyebrow to help prevent injury is permitted.

Embrocation. The use of scents, oils or rubbing alcohol immediately prior to the contest is forbidden. When the body warms up during clinches, there is the danger that this, mixed with sweat, may get into the boxer's eyes and cause damage. There are also people to whom the smell is offensive or for whom these concoctions cause breathing difficulties.

Gum shields. A boxer should never use a borrowed gum shield. The gum shield should fit exactly and comfortably. A poorly fitting gum shield is useless and can cause buccal irritation or nausea. A shield knocked out of the mouth should be thoroughly washed before replacing. No boxer should be permitted to wear dentures during a contest. Boxers wearing braces should have the written consent of their orthodontist and have a gum shield that is fitted to their own braces.

Headguard. It is advisable that each boxer has his own headguard. In this way it can be properly fitted. Also a borrowed headguard can be a cause of infection. When headgear is supplied to the participants at a tournament, it is to be thoroughly cleaned with 10% bleach solution by the tournament personnel between uses.

Sponges and towels. Each boxer must have his own sponge, towel and clean water. The practice of wiping the opponent's face after a bout should be discontinued. It is not only unhygienic, but can also lead to serious infections, including hepatitis and HIV. Sponges which have been immersed in dirty water or have been on the floor should never be used to wipe the boxer's face. The coaches who are at the ringside should have a supply of clean gauze to examine and apply to a cut or abrasion.

Bleeding. The most frequent boxing injuries are cuts and abrasions. Since the wearing of head guards became compulsory, the number of such injuries has gone down. On the other hand, bleeding noses are more common. It must always be emphasized that the immunodeficiency disease AIDS is primarily transmitted through the exchange of infected blood. It is therefore theoretically possible that the disease could be passed on via open wounds if both boxers are bleeding. For this reason the following infection control guidelines should be adhered to:

- a) Coaches and referees must use clean gauze when examining cuts or abrasions. The used gauze should be disposed of in sacks designated for that purpose at the ringside.
- b) In the case of bleeding it is recommended that the referee consult the Medical Jury.
- c) The use of disposable gloves is advisable when examining an injured boxer.
- d) Splashes of blood on the skin should immediately be washed away with soap and water.
- e) Splashes of blood in the eyes or mouth should immediately be rinsed away with plenty of water.
- f) If other surfaces are accidentally contaminated, they should be cleaned with a fresh 10% solution of household bleach in water. If this comes in contact with the skin, it should be immediately washed off.

Stimulants. AIBA forbids the use of stimulants apart from water. Smelling salts contain ammonia, which is a stimulant and can worsen nasal hemorrhaging and for this reason it must not be applied between rounds.

### ***Appendix III: Competition Rules for Female Boxers***

1. Principle: The Articles and Rules of AIBA shall apply to the training and competition of female boxers in lieu of or in addition to the special provisions contained in this document.

2. Special Provisions:

#### **DRESS**

- Female Boxers may wear a short sleeved T-shirt beneath their vest.
- Females may wear a well-fitting breast protector not interfering with the boxer's ability to compete. Such breast protectors must not be manufactured in any material that might be harmful to the opponent.

- Hairnets, head cloths, rubber bands or other banding devices may be used to secure hair beneath the head guard. Hair pins or clips or any device made of metal, plastic, wood or any other hard material are not permitted.

#### MEDICAL, EXAMINATION AND WEIGH-IN FOR COMPETITION

In addition to their international passbook, female boxers shall furnish, prior to any competition, all the information required as to their physical condition and confirm with their signature that they are not pregnant. In the event of incorrect statements being made, the female boxer shall be held responsible for any consequences resulting therefrom.

- The organizers of mixed events where both males and females compete shall arrange for separate rooms for the medical examination and weigh-in for males and females. If the situation dictates that the same room must be used, the males and females must occupy the room at separate times.
- Female boxers shall have weightmistresses attending the scales at weigh-in.

#### ROUNDS FOR FEMALES

The duration of bouts for female boxers shall be 3 rounds of 2 minutes each. In national contests it is possible to agree on other formats.

#### REFEREES AND JUDGES FOR FEMALES

Female boxing contests shall be controlled by a female or a male Referee. As for the panel of judges, it may consist of both females and males.

#### THE MEDICAL AND COMPETITION JURIES FOR FEMALES

The Juries at female boxing competitions shall be composed of female and/or male doctors and officials respectively.

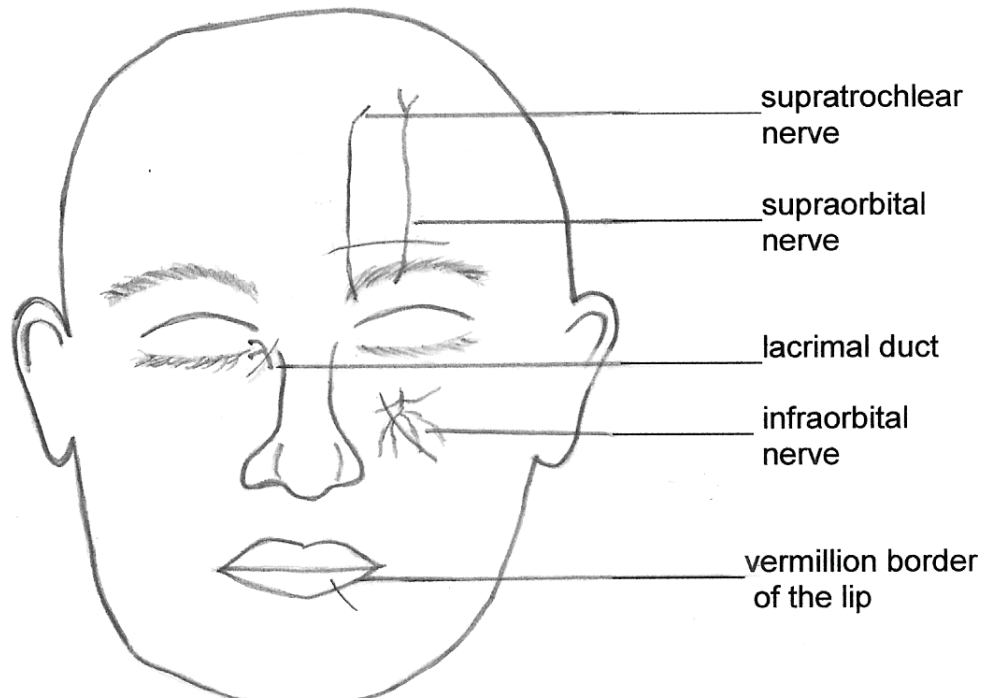
### ***Appendix IV: Illustrations***

See the following pages for an example of a Head Injury Follow-Up Sheet, a Facial Lacerations Illustration and Diagrams of the Field of Play.

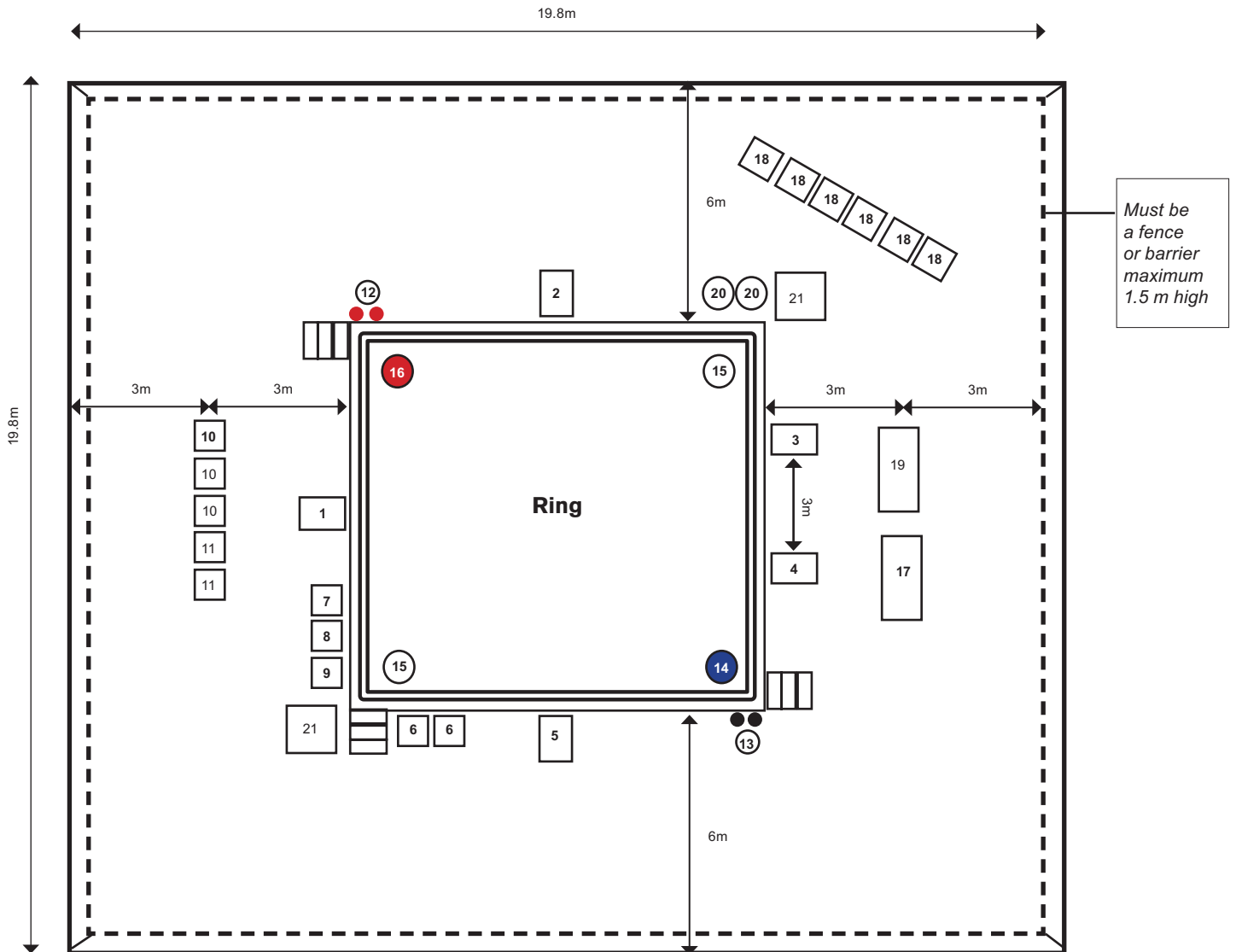
## PROTOCOL FOR HEAD INJURY FOLLOW-UP

1. Keep the athlete at rest for 24 hours. No school, practice, competition or work. No strenuous mental activity, such as computer games.
2. Clear liquids only for eight hours. No alcohol.
3. You may allow the athlete to sleep, but check his condition every hour while awake and every two hours while sleeping. See that the athlete responds to a pinch or shake and that his color, pulse and breathing are normal.
4. You may give the athlete one regular Tylenol tablet, but not aspirin, every four hours as needed for a headache. Nothing stronger should be given unless you are directed to do so by a physician.
5. Complications that should be brought to the immediate attention of a physician are:
  - a. Severe or prolonged headache that does not subside with a cool wet towel to the head or a Tylenol tablet.
  - b. If the athlete vomits more than two or three times.
  - c. There is a convulsion (fit or seizure) or involuntary movements of the arms, face or legs.
  - d. If the athlete complains of weakness or is unable to move one or both of his arms or legs.
  - e. If there is difficulty with walking.
  - f. If the athlete cannot be awakened easily or is lethargic.
  - g. If there are peculiar movements of the eyes, difficulty of focus, one pupil is much larger or different from the other or double vision.
  - h. If the athlete displays any kind of repetitive behavior such as repeating the same word or phrase over and over again; or peculiar behavior; or slurred speech; or belligerent behavior.
6. Abide by all restrictions that have been imposed by the referee or doctor.

## Facial Lacerations

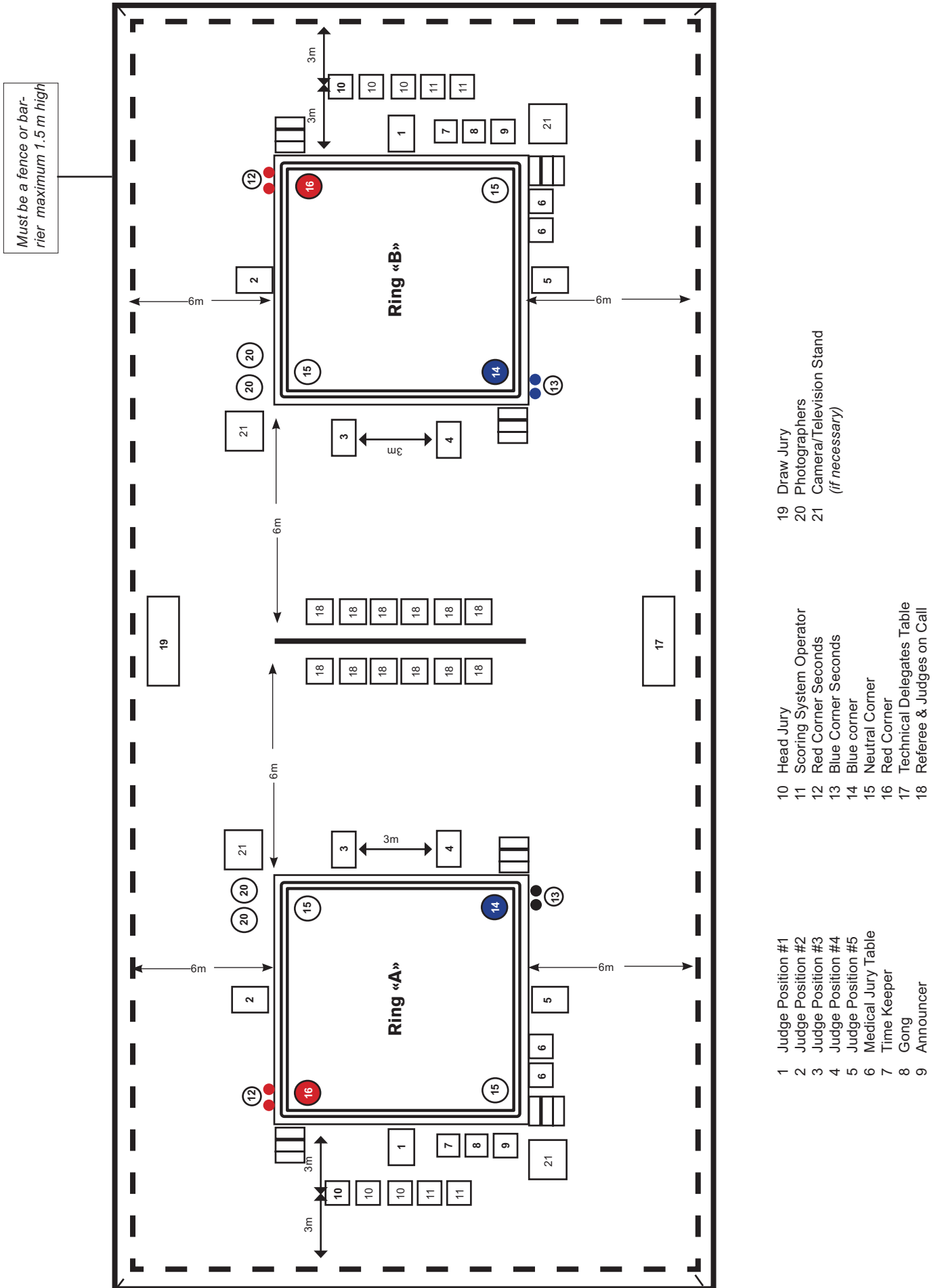


### 15.1.1. FOP Formation of one ring



- |                            |                             |
|----------------------------|-----------------------------|
| 1 Judge Position #1        | 12 Red Corner Seconds       |
| 2 Judge Position #2        | 13 Blue Corner Seconds      |
| 3 Judge Position #3        | 14 Blue corner              |
| 4 Judge Position #4        | 15 Neutral Corner           |
| 5 Judge Position #5        | 16 Red Corner               |
| 6 Medical Jury Table       | 17 Technical Delegates      |
| 7 Time Keeper              | 18 Referee & Judges on Call |
| 8 Gong                     | 19 Draw Jury                |
| 9 Announcer                | 20 Photographers            |
| 10 Head Jury               | 21 Camera/Television Stand  |
| 11 Scoring System Operator |                             |

15.1.1. FOP Formation of two rings



- 1 Judge Position #1
- 2 Judge Position #2
- 3 Judge Position #3
- 4 Judge Position #4
- 5 Judge Position #5
- 6 Medical Jury Table
- 7 Time Keeper
- 8 Gong
- 9 Announcer

- 10 Head Jury
- 11 Scoring System Operator
- 12 Red Corner Seconds
- 13 Blue Corner Seconds
- 14 Blue corner
- 15 Neutral Corner
- 16 Red Corner
- 17 Technical Delegates Table
- 18 Referee & Judges on Call

- 19 Draw Jury
- 20 Photographers
- 21 Camera/Television Stand (if necessary)