

# **Medical Risk Assessment of Team Teach skills syllabus**

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May 2020

## **Introduction**

This medical assessment was commissioned by Team Teach and supersedes previous medical reviews (2009, 2015 and 2018).

I am advised by Team Teach that there have been no reports of serious injury arising from the use of skills delivered in the syllabus. In the preparation of this report, I have reviewed the skills as they appear in the Intermediate and Advanced Trainer manuals (electronic copy of the Advanced Trainer's manual 2021 v2). I am advised that the 'T Wrap' has been removed from the syllabus (as recommended in my previous medical review).

In the preparation of this assessment, I have not reviewed any use of force reports or been made aware of any adverse outcomes arising from the use of Team Teach techniques.

## **General Comments**

Any and all physical interventions may result in injury. Injury can occur from: slips; trips and falls; failure of the skill; escalation of violence; obstacles and hazards within the operational environment; the nature of the skill, and any specific vulnerabilities or conditions of trainers, staff and subjects/service users.

Injury will inevitably occur in some operational situations where there is a need to intervene to prevent imminent violence or to terminate a violent episode. The skills selected for these situations should have the best possible safety profile in comparison with any other skills that might be executed in the same situation for the same purpose.

A number of medical conditions may precipitate unintentional aggression and violence. These include: epilepsy; diabetes; drug effects; alcohol; thyroid disease; dehydration and other metabolic disorders; mental illness and a number of psychiatric and behavioural conditions. Staff and trainers require training in this area. Where at all possible, triggers or antecedents of violence for service users need to be recorded in care plans and made known to staff. Where possible, staff also need to be clear what techniques and skills should be used for each service user.

Staff may be vulnerable to injury in both the training and operational environments due to: individual constitution; fitness; musculoskeletal disorders;

obesity; cardiovascular and neurological disorders; stature; gender; psychological vulnerability; individual personal history; physical hazards in the operational environment; medication; pregnancy and recent injury or surgery. They may also be injured if the operational situation escalates or if the skills fail.

Service users also may be vulnerable to injury due to: stature; gender; physical and mental constitution; age; development (physical and psychological); mental illness; special needs; recent injury; musculoskeletal, cardiovascular and neurological disorders; individual previous medical history; physical disability; exhaustion; effects of medications; and any hazards within the operational environment.

Restraint skills may be relatively safe at the moment of deployment, but if the subject is not adequately monitored, there is a danger of restraint--related injury or death. Staff and trainers need very specific training in this respect.

The predictable risks of each skill within the Team Teach syllabus are presented. These cannot be exhaustive as any specific vulnerabilities of both staff and service users may render them susceptible to adverse outcomes by virtue of their condition or exceptional operational circumstances.

It is not possible to accurately quantify the medical risks for any particular skill as this will depend on a number of factors including: relative size, strength and gender of staff and subject; accuracy of executing the skill; the dynamics and environmental constraints of the situation; physical and mental constitution of staff and subject; escalation/de-escalation of the situation and personal vulnerabilities of both parties. The risks of each skill set within the syllabus are described but cannot be quantified accurately. They serve to inform managers and trainers of the predictable risks of each skill.

Appropriate reporting systems will, in time, inform the organisation and its trainers about the safety of each skill in terms of injury rates, success rates and adverse or positive outcomes. Future medical assessments should be guided by the reporting process.

## Children

Many of the skills within the Team Teach syllabus may be used on children. Children have specific vulnerabilities when subject to physical interventions. These include: stage of psychomotor and behavioural development; immature bones and joints; relatively large head; other anatomical differences and an increased physiological reserve. All physical interventions used on children must be used in conjunction with behavioural interventions and communication skills appropriate for the specific young person and situation.

Restraint and physical intervention are likely to be emotionally traumatic for children. Where at all possible, there should be individualized behavior management plans for children and older young persons in which physical interventions may or may not have a role. Physical intervention must only be used when there is no alternative and when de-escalation techniques have failed or when there is an imminent and actual risk of injury. Sound communication skills must be used before, during and after physical intervention. De-escalation must be employed as soon as is practicable and safe.

Immature joints may be vulnerable to skills employing joint manipulation. Pain or injury after physical intervention requires early medical assessment and careful and accurate documentation.

Some physical interventions may result in discomfort and pain. The deliberate application of pain to terminate a threatening or violent episode, ('pain compliance'), is not supported for use in children and young persons except in extreme circumstances in which failure to terminate a violent or very threatening episode definitively and immediately is likely to lead to greater harm.

Interventions that result in contact with sensitive areas (genital area, top of thighs, breasts in females) may cause psychological trauma and should be avoided where at all possible. Supine restraints in young persons who have been victims of sexual abuse may be particularly traumatic and therefore used only when absolutely necessary.

Before dealing with the specific skill sets of the syllabus, I wish to establish some key concepts relating to the safety of physical intervention training and operational deployment:

1. Trainees should have an appropriate occupational health review (or equivalent) to determine fitness for operational role and fitness to train. These should be synonymous and dictated by the anticipated demands of both the training and operational environments.
2. A risk assessment of the training venue should be undertaken to minimise the risk of injury.
3. A 'warm-up' routine is recommended to gently increase aerobic activity and passively stretch the joints that will be exercised during training.
4. A risk assessment of the operational environment should consider the potential risks of the skills intended to be taught for that specific operational environment and context.
5. Trainees should be told what the likely stresses and strains to their body might be during the training, appropriate to the selected menu of skills.
6. Trainees should be required to declare any condition that might affect their fitness to train or increase the risk of injury or exacerbate a previous or concurrent condition. Having done so, a suitable declaration should be signed and kept as part of the training record.
7. Each and every skill needs to have its risks described for the trainee/operator and subject, for both the training and the operational environments. This should be described before each skill is demonstrated, and while the skill is taught.
8. There should be detailed instruction on the risks and signs of positional asphyxia together with education on acute behavioural disturbance to include 'excited delirium', neuroleptic malignant syndrome and serotonin syndrome.
9. Staff require a health assessment prior to training: the degree of fitness needs to reflect the rigours of their intended physical skills training package and operational environment.
10. Standards of fitness for those delivering the training also need to be determined in the same manner.

11. Trainers need to be given clear guidance on minimum standards of fitness for staff in each operational environment.
12. Trainees need to be monitored for injury or exhaustion during and after training.
13. Service users need to have any susceptibilities to physical intervention identified and clearly documented in their individual care plans so that staff are clear which behavioural interventions and physical skills are favoured for management of challenging or violent behaviour.
14. The selection of skills must be relevant to that operational environment. This needs to be determined through a reporting process.
15. Specific training in recovery and de-escalation from physical intervention is required.
16. Staff need an occupational health review to consider the risks and mitigation of risk of transmissible diseases from bites.

I shall now present below the predictable medical risks of the skills in the syllabus. I have classified these risks into 'likely', 'unlikely' and 'critical'. 'Critical' indicates that in extreme circumstances, there is the potential for serious injury or a threat to life. Where possible, I have added risk reduction advice that I believe will serve to reduce the identified medical risks.

## **INTERMEDIATE TRAINER MANUAL**

The warm up routine is appropriate for the level of skills delivered within the manual.

I recommend that the manual contains a section on fitness to train and fitness to be trained, the need to declare any conditions or injuries that may be exacerbated by, or preclude training together with the mechanisms for seeking medical help prior to participating in training.

A self-declaration medical form is recommended.

### Basic skills

Table 1.

<b>Skills</b>	<b>Risk grade</b>	<b>Risk to service provider</b>	<b>Risk to service user</b>
Exercises dealing with biting	Critical	Bites can transmit certain diseases, and are easily infected.	Tooth damage is likely if breaking away from a bite that connected.
	Likely	Bite marks, scratch marks, breaking of skin and bleeding	Injury to lips, jaw and teeth when releasing from a connected bite.
	Unlikely	Muscle, tendon and nerve damage from powerful bite	Jaw dislocation is a possibility with strong push into a bite.

Risk reduction strategies	<p>Preventing a bite from connecting is crucial, but if it has connected pulling the arm away can increase the risk of breaking skin.</p> <p>Tooth injury to patient may occur when pushing into the bite. It is important to stop pressing when the bite has been released.</p> <p>Staff need to be protected by appropriate immunisation and have access to post exposure prophylaxis treatment. (To include HIV, Hepatitis)</p>
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Table 2.

<b>Skills</b>	<b>Risk grade</b>	<b>Risk to service provider</b>	<b>Risk to service user</b>
Exercises dealing with nipping and pinching 5d	Critical	Nil	Nil
	Likely	Minor skin injury and bruising	Minor injury to fingers and nails, including nail breaks and tears
	Unlikely	Bleeding and infection due to broken skin and dirty nails	Finger sprains due to powerful push on bent fingers
Risk reduction strategies	Generally low-risk skills, avoid pulling through a pinch to lower the risk of breaking skin.		

Table 3.

<b>Skills</b>	<b>Risk grade</b>	<b>Risk to service provider</b>	<b>Risk to service user</b>
Release from hair, clothing and arm grabs	Critical	nil	Shoulder dislocation due to circular motion exercises (2f)
	Likely	Soft tissue injury to wrist, scalp, haematomas and scratches to wrist due to release from powerful hold.	Low grade finger injuries including injuries to nails, pain in the wrist of attacking hands. Circular motions may cause shoulder injury.
	Unlikely	Wrist sprains when escaping very powerful grip. Facial injury due to face directed release motion and sudden grip release.	Finger dislocation while resisting release (more in patients with joint problems), losing balance and falling due to circular motions (2f)

Risk reduction strategies	This exercise is safe for staff. The highest risk to the subject stems from circular motion releases which can cause shoulder dislocations when the elbow is facing forwards at the end of the exercise. To ameliorate the risk take care to finish the circular motion the moment the subject loses grip or turns his back. Hair pulls carry a risk of falling down which can be ameliorated by lowering the center of gravity, bending the knees and leaning forward with the head slightly bent. Securing the pulling hand reduces the risk of neck injury due to quick motion and tissue injury due to pulls.
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Seating a child on a bean bag is presented well and is supported. I have prepared medical risk assessments for UK PODS and this can be supplied by the company to support the use of this product for the safe restraint of young persons.

Table 4.

Skills	Risk grade	Risk to service provider	Risk to service user
Exercises that deal with release or prevention of neck grips from the front or back (and head locks)	Critical	All attacks that connect with the neck carry a risk of fainting, suffocation and death, and are dangerous	Shoulder dislocation due to circular motion exercises, as in table 1.
	Likely	Soft tissue injuries on chest and neck due to forceful grab. Neck grabs can cause pain and may result in throat injury and hoarseness.  Grabs from the back carry risk of jaw and tooth injury, facial bruising, neck bruising, ear bruising	Same as table 1 for both regular and circular motions
	Unlikely	Neck grabs can press on carotid arteries in the neck, which in some individuals with artery disease may cause a dissection of the artery or clot formation  Grabs from the back (3e-h) carry a risk of jaw dislocation, broken teeth due to forceful pressure above neck.	Same as table 1 for both regular and circular motions
Risk reduction strategies	All attacks to the neck should be considered potentially deadly and all care should be taken to avoid the grab before it connects. If a grab connects it must be dealt with as quickly and aggressively as possible. When the neck is grabbed, the staff member should flex it forward to press with the chin on the hands to reduce likelihood of injury.  Subject shoulder injuries – same as table 1.		

Table 5.

<b>Skills</b>	<b>Risk grade</b>	<b>Risk to service provider</b>	<b>Risk to service user</b>
Exercises dealing with grabs around the body	Critical	Being pinned with free arms carries a risk of suffocation especially on smaller-framed staff members.	Pain, risk of finger fractures and dislocations (in extreme circumstances).
	Likely	Losing balance due to being lifted and dropped, and falling forward may injure knees and face. Being crushed in a bear hug could bruise arms or chest.	Bruising and pain in forearms shoulder and neck bruising, finger pains from releases.
	Unlikely	Rib fractures, lung contusion and abdominal organ injury can be caused by powerful bear hugs. Losing balance and having the patient fall on the staff member could cause facial and knee injuries.	Losing balance and falling down together with the staff member can cause injuries to the knees, elbows and face.
Risk reduction strategies	It is better to escape the bear hug before it closes, since a powerful closed bear hug is hard to break. Keeping feet wide and planted, lowering center of gravity and interfering with the locking of the hands are important to prevent falls and suffocation.		

Table 6.

<b>Skills</b>	<b>Risk grade</b>	<b>Risk to service provider</b>	<b>Risk to service user</b>
Exercises dealing with restraints performed from two sides without crossing the chest	Critical	nil.	Keeping subjects bent forwards or holding the head of a bent forward subject increases risk of suffocation and strangulation.  Side holds create a risk for shoulder injury
Transfer to seated restraint	Likely	Bruising from handling flailing arms and legs. Knee injury from dropping to knees.	Every joint manipulated (shoulder, elbow, wrist) is likely to cause injury From minor strains up to fractures/ dislocations. Pain is likely.  Bruising from when being lowered to kneeling position
	Unlikely	Quick or careless descent to kneeling position can cause severe knee damage.	Dislocation and rupture of the joint capsule at shoulder and wrist is unlikely other than in patients with connective tissue disorders. Fractures can occur in elderly or osteoporotic patients due to forceful manipulation.
Risk reduction strategies	<p>Holding a subject in a neutral position with chest facing forward and back straight is crucial to preventing both suffocation due to forward flexion and shoulder injuries due to backwards arm pulling.</p> <p>Restraints that immobilise shoulders, elbows and wrist should use the minimum amount of force possible, which can be rather low even in powerful patients to ameliorate the risk of joint (especially wrist) injury.</p> <p>Moving from standing to kneeling position should be done with care both to service users' backs and to staff's knees. Descent to the knees should be done by bending one knee and carefully placing the other on the floor.</p>		

Table 7.

<b>Skills</b>	<b>Risk grade</b>	<b>Risk to service provider</b>	<b>Risk to service user</b>
Exercises dealing with responses to punches and kicks	Critical	An attack that connects with the face can cause loss of consciousness.	Nil
	Likely	Some strikes will connect. Bruising of targeted body part is likely.	Nil
	Unlikely	Powerful strikes can break ribs, noses and jaws, contuse internal organs and break skin and cause bleeding.	Loss of balance from deflected blow can cause falling forwards
Risk reduction strategies	Defense of face, chin-tucking and closing the mouth will ameliorate the risk of jaw, tongue and tooth injury, and reduce the risk of an attack successfully connecting with the face. Since the exercises deal with deflection and disengagement – it is important to remain facing the patient while retreating to prevent unexpected strikes.		

Table 8.

<b>Skills</b>	<b>Risk grade</b>	<b>Risk to service provider</b>	<b>Risk to service user</b>
exercises dealing with breaking up fights	Critical	<p>This involves spinning a combative person in the direction of the person performing the exercise, which can result in being hit.</p> <p>Breaking up fights between two people can cause injury due to an unrestrained person continuing the assault.</p>	nil
	Likely	<p>Bruising from handling, flailing arms and legs.</p> <p>Losing balance and falling down due to spinning motions and intricate leg work required</p>	Loss of balance and falling down, injuring hands and knees.
	Unlikely	nil	Injury and sprain of shoulder due to grab and spin exercises.
Risk reduction strategies	Intervening when two people fight requires several people, and carries a high risk of continued assault from an unrestrained party. Turning the back on them is dangerous and the intervention has a chance of success only if performed by multiple people at once, preferably more than the number of people involved in a fight.		

**ADVANCED TRAINER MANUAL 2021 v 2 (electronic version)**

The section on transport is well-written. Some non-compliant subjects might require handcuffing and/or seated restraint during transport. The company is recommended to consider this.

The advanced stretches and warm-up are reasonable and should be added to and not delivered instead of the warm -up exercised presented in the Intermediate manual.

Table 9.

Exercise	Risk grade	Risk to service provider	Risk to service user
Blunt object take away, chair defense.	Critical	Risk of head and face injury, fractures and significant soft tissue injury on any attempt to subdue armed opponent	Nil
	Likely	Hits are likely to connect, wounding the region they hit.	Strain on shoulders and elbows
Effectiveness	Exercises presented here would be difficult to perform for people who have not practiced them often and against realistic simulation. Without proper training this exercise carries a significant risk of injury.		
Special population	People with lax joints can potentially suffer shoulder dislocations when the arm is brought back and rotated inwards.		
Risk reduction strategies	Skills that deal with weapon attacks are difficult and risky to perform, call for assistance as early as possible, and prioritise avoiding getting hit over disarming the opponent.  Consider replacing skills that turn back on the opponent (Angle 3), as they present significant risk to the service provider.		

Table 10

Exercise	Risk grade	Risk to service provider	Risk to service user
Edged objects	Critical	High risk of injury due to stabbing affecting any part of the body, risk of death or disability	Nil
	Likely	Blood loss, soft tissue injury are likely	Wrist pain and strain possible
Effectiveness	<p>Exercises presented here would be difficult to perform to people who have not practiced them often and against realistic simulated opponents. Without proper training this exercise is likely to lead to injury to its performer.</p> <p>Dealing with edged objects is even more difficult and dangerous than with blunt ones, almost certain to cause injury to the service provider.</p>		
Special population	None relevant		
Risk reduction strategies	<p>Skills that deal with weapon attacks are difficult and risky to perform, call for assistance as early as possible, and prioritize avoiding getting hit over disarming opponent.</p> <p>Any skill that deals with edged weapons is inherently dangerous. Recommend focusing on simple movements, and striking elements to mitigate risk to service provider.</p>		

Table 11.

Exercise	Risk grade	Risk to service provider	Risk to service user
Long blunt object	Critical	Risk of head and face injury, fractures and significant soft tissue injury on any attempt to subdue an armed opponent	Risk of elbow fracture or dislocation due to circular movement locking the arms in place while extended.
	Likely	Hits are likely to connect, wounding the region they hit.  Throat injury likely on choking attempt	Risk of uncontrolled descent due to loss of balance.
Effectiveness	<p>Exercises that deal with stopping a swing would be difficult to perform to people who have not practiced them often and against realistic simulated opponents. Without proper training this exercise carries a risk of significant injury to injury to the staff member.</p> <p>Exercises that deal with pressure being applied with long blunt object are less likely to lead to harm for service provider</p>		
Special population	People who have ataxia, gait disturbances or instability are at a higher risk of falling in this scenario.		

Risk reduction strategies	<p>Skills that deal with weapon attacks are difficult and risky to perform, call for assistance as early as possible, and prioritize avoiding getting hit over disarming opponent.</p> <p>Perform all movements briskly when pressure is applied with long blunt object, otherwise the opponent will tense against the movement.</p>
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Table 12.

Exercise	Risk grade	Risk to service provider	Risk to service user
Chair to back Ground recovery	Critical	Nil	Risk of head injury if not performed correctly
	Likely	Minor soft tissue injury from uncontrolled arms during descent.	Nil
Effectiveness	This is an effective transition technique, focus should be placed on correct descent to prevent back injury to service providers		
Special population	None relevant		
Risk reduction strategies	Protection of the head during descent is imperative		

Table 13.

Exercise	Risk grade	Risk to service provider	Risk to service user
Front Ground recovery, Cradle shield and Changing Face into front Ground recovery	Critical	Nil	Asphyxiation risk inherent to prone position, monitor breathing and de-escalate as quickly as possible being ready to disengage immediately should there be any signs of distress.
	Likely	Nil	Nil
Effectiveness	Prone holds are very effective and simple to perform, but also carry the risk of positional asphyxia. Avoid teaching any movement that puts pressure on neck, chest, back or sides.		
Special population	People with obesity, lung disease or severe scoliosis are at a higher risk of positional asphyxia, monitor closely in accordance with training on positional asphyxia and de-escalate as quickly as possible. Be ready to disengage immediately should there be any signs of distress.		
Risk reduction strategies	To mitigate the risk of positional asphyxia, all pressure must be removed from neck and torso.		

Table 14.

Exercise	Risk grade	Risk to service provider	Risk to service user
Full and Cradle Shield	Critical	Injury to face due to back-headbutting	Nil
	Likely	Injury to fingers cradling arm due to resistance	Minor soft tissue injury when resisting
Effectiveness	This technique will only work when there is a significant strength difference between service provider and user. Typically, this technique should be reserved for use on children and early adolescents, or people who are not actively resisting.		
Special population	This technique is intended for use on children and young adolescents, and should be done gently.		
Risk reduction strategies	Close the distance between the head of service user and the providers' body or shoulder to avoid head-butting.		

Table 15.

Exercise	Risk grade	Risk to service provider	Risk to service user
Ground fights	Critical	Nil	Nil
	Likely	Nil	Minor soft tissue injury
Effectiveness	This is a simple and effective technique.		
Special population	None relevant		
Risk reduction strategies	Always be aware that the person on the ground might attempt to continue the fight.		

Table 16.

Exercise	Risk grade	Risk to service provider	Risk to service user
Ground assaults	Critical	The starting point for these techniques is risky, with asphyxiation and facial injury a real threat.	Nil
	Likely	Soft tissue injury to face and throat.	Soft tissue injury of forearms, minor contusions from roll to floor
Effectiveness	The manual part is relatively easy to perform to prevent the risk of asphyxiation. Removal of straddling opponent with the hips is more advanced and may be very difficult with weight differences favoring the straddler.		
Special population	None relevant		

Risk reduction strategies	Avoid getting straddled if knocked down and attempt to get up immediately. Engaging opponents while lying supine is incredibly dangerous.
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