

HAND GUARDS, HAND CARE and use of GLOVES & LOOPS

All gymnasts will, at some time, require the use of handguards while training and competing on all Bars apparatus and Rings. The types of guards are:

1. **Palm guards** – commercially produced leather guards running flat across the palm from the base of middle two fingers to the wrist.
2. **Tape guards** – “home made” strips of athletic strapping tape folded to form a strip palm guard that loops over the middle finger and runs flat to the wrist where they are taped in place by further strapping tape. Tape guards ALWAYS loop and run vertically on the palm.
3. **“Loop” or cloth guards** – “home made” strips of cloth or leather that loop over the middle finger and tie off around the wrist.
4. **Dowel guards** – commercially produced leather guards with a small piece of dowel rod sewn into the guard just below the finger holes. This guard is worn on the top finger (distal) finger joints, and is attached firmly to the wrist by buckles or velcro straps. The dowel forms a permanent fold in the guard which “hooks” onto the bar or rings. WAG and MAG dowel guards differ and are designed specifically for each apparatus.



1. Palm guards



2. Tape hand guards



3. Loop or Cloth guards



4. Dowel hand guards

All guards serve the purpose of limiting the frictional forces acting on the hands, and thus reducing the occurrence or severity of blisters and “rips”.

The selection and use of hand guards is depends on the needs and characteristics of the individual user. For example, while the use of dowel guards are biomechanically demanded for the men’s events of Still Rings and on horizontal bar, there is no exacting reason why dowel guards must be worn on Uneven Bars. Some gymnasts will grow through their entire gymnastics career without the need for hand guards.

However, most gymnasts will have to consider when and how to use guards, and if the choice is dowel guards some considerations are important. These are:

1. Hand and grip strength
2. Stepping into the use of dowel guards
3. Ensure correct hang and swing wrist angle, and
4. Be aware of possible risks.

Let’s look at each of these topics:

Hand and grip strength

It is of critical importance that the young gymnast develops sufficient hand and forearm strength BEFORE using dowel hand guards. This will involve establishing a level of upper body strength and allowing some time to learn to swing on bars. The authors recommend that the gymnast be able to perform ten top grip chin-ups and confidently demonstrate large swings on bars with grip re-adjustment and a strong bar “pressure” (“pushing the bar with straight arms). Early use of dowel guards may contribute to the young gymnast (with small hands) not being able to “feel the bar”.

Stepping into the use of dowel guards

The young gymnast may better adapt to dowel handguards if there is first a period of swinging with palm guard. This will accustom the gymnast swinging on bars with a leather strip between the hand and the bar.

Ensure correct hang and swing wrist angle

Correct fitting of dowel hand guards is critical to safe swinging on bars. Firstly, A correctly fitted dowel guard should allow the hand to open fully with the guard lying flat on the hand as the dowel fold is extended. Secondly, when hanging and swinging on the bar, the guard MUST be



of sufficient length to allow the dowel fold to loop over the bar
AND have a straight wrist angle in hang.

Correct length of dowel hand guards

Be aware of possible risks.

Inappropriate or early use of dowel guards can lead to unplanned releases (“rip offs”) from the Horizontal Bar or Uneven Bars. Aside from the potential injury risk to the gymnast this can sap the confidence of a young gymnast.

1. There are different types of dowel guards for Uneven Bars, Still Rings and Horizontal Bar. This MUST NEVER be exchanged as serious wrist and arm injuries can result.
2. Guards that are stretched, cracked or torn should be discarded. Guards that have damaged wrist strap joins MUST be immediately repaired to new condition. Performing with guards in poor condition can contribute to unintended release and falls.
3. Water and hand guards - Many gymnasts use water with hand guards to enhance grip. Do NOT over wet hand guards as this will overtime cause damage to the guards. Women gymnasts should lightly spray the bars with water where needed. Many gymnasts find the SUGAR WATER is best for bars application and promotes the best grip.
4. Caution is advised in the use of dowel hand guards in skeletally immature gymnasts. Yong-Hing et al (1988) speculated that a chronic injury to the distal radial epiphysis in one 13 year-old gymnast was due to the tensile forces produced during swinging with the use of dowel grips. Although cause and effect cannot be established from this study, a separate investigation showed that hand guards allowed greater tensile forces to act across the wrist during giant swings on bars compared with bare hands alone (Neal et al. 1995).
5. Acute injuries associated with dowel grips usually occur when the grips used by the gymnasts become locked on the bar as the gymnast's momentum continues on through the skill being performed. These “grip lock injuries” are mainly a risk in men’s gymnastics and may be caused by grips that are too large, worn, stretched, or slide up the wrist (Samuelson et al, 1996).

RECOMMENDED HAND CARE FOR GYMNASTS

1. Keep your hands clean and moisturized (soft)

Before and after each training session, wash your hands thoroughly with soap and water. After training and when your hands are clean, moisturize your palm, hand and wrist areas with a quality moisturizing product that works for your skin type. Remember – dry, hard skin will crack and more easily rip.

2. Use hand guards.

Hand guards will provide a layer of material between the bar and your hand. Be aware that hand guards can rub against the skin and be a cause of a blister or a rip. Use wrist or sweat bands under the hand guard wrist straps. A heavier neoprene rubber wrist bands are used to prevent rips on the wrists from the use of dowel hand guards.

3. Use a pumice stone on the skin to reduce the buildup of calluses. However, don't over-use callus trimming, as this method can risk rubbing a callus raw. A little pumice rubbing on areas showing excess callusing will be helpful. This will ensure a medium-softness of your hands AND prevent callus build up which can “catch” and cause a rip.

Recommended Treatment for Rips

Prevention of infection is the first thing to consider when treating a rip (which is a wound or tear of the skin). The most important thing to do after a rip occurs is to thoroughly wash the hand with warm water and a mild soap

Once the rip has been washed and dried to prevent infection, then a sterile bandage should be applied. The type of sterile bandage depends on the severity of the rip and the cost of treating the wound. Change the bandage when it becomes wet. Please let the hand wound heal over a 2-3 day period. A tape hand guard (made out of sports tape) placed under a standard leather hand guard to protect a just healed rip is a useful practice.

No matter what type of dressing used to cover a wound, signs of infection need to be assessed. These signs of infection include: pus or yellowish discharge (exudate), redness (erythema), and fever. If these signs develop the wound should be evaluated by a physician for further cleaning and the use of antibiotics.

How to tape your hands for gymnastics.

This has proven to be a most effective method of taping hands as a preventative to tears or after one has already torn. If you tape horizontally the tape rolls up and IT DOESN'T LAST.

Use rigid athletic tap - the cheap stuff and or plastic tape DOES NOT WORK.

This technique available really makes a huge difference because you can still swing, even if you have a tear with this set up.



OR – use a tape guard which is exactly the same taping method, but the tape is not adhered to the skin – the tape guard sits under the normal guard.

THE SAFE USE OF LOOPS AND GLOVES

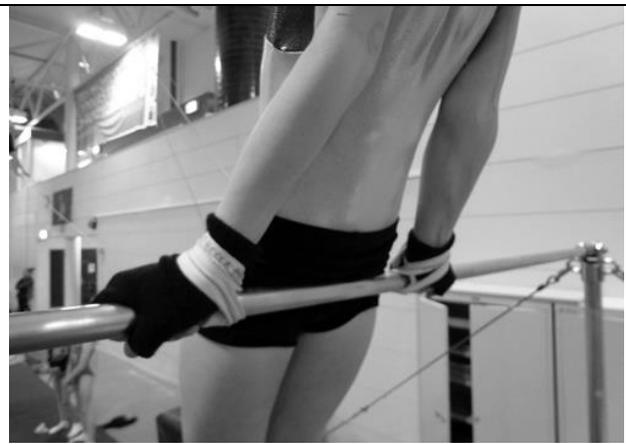
Use of loops for WG gymnasts on men's high bar

Young gymnasts will often use loops (straps) on men's high bar as a learning tool at the developmental level. They have small hands and are often unable to have a strong grip around the bar when learning higher level skills. Teaching your gymnasts in loops (straps) also enables them to learning swinging and circle skills with more confidence.

There are TWO types of loops (strap) systems: 1. loops WITH tight fitting woollen gloves 2. loops with piping (no gloves are worn). We will discuss system 1 – loops WITH gloves on clean metal bar.



Top grip in loops & gloves



Reverse grip in loops & gloves

Straps must NOT be used without supervision and as an Intermediate Coach you must ensure gymnasts are taught how to use wrist straps safely and are NOT encouraged to perform skills they are not physically prepared just because they are strapped into the bar.

Using wrist straps on a men's high bar is a great teaching tool because:

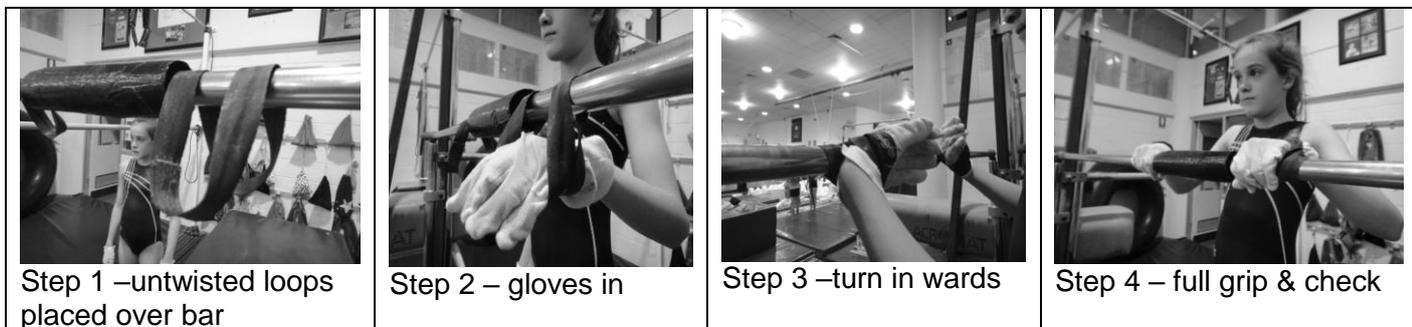
- They let the gymnast with small hands get their whole hand around the bar.
- They provide a 'frictionless environment'. The gymnast can use their whole energy in swinging.
- **Provided they are used correctly**, gloves & loops are safe for the gymnast to use.

Follow these safety tips when using loops:

- First – always check the apparatus and matting, for safety. Check that there is adequate matting around the bars. It is recommended that the high bar is only just high enough that the gymnast can clear their feet.
- The loops MUST be made from seat belt webbing – this material will not stretch or tear.
- The gymnasts should check their straps and gloves for wear and tear every time prior to using them. Straps may wear at the stitching or in the middle of the material.

- All care must be taken when using wrist straps. Straps that are too tight or put on incorrectly can lead to injury to the gymnast. Gymnasts should not use their straps unsupervised!
- Coaches need to explicitly teach gymnasts to turn their wrists correctly in straps.
- Straight arms need to be emphasised strongly when working in straps, both from a technical and safety perspective. Bent arms are not only a major deduction but a hindrance to learning more advanced skills.
- Ensure that the gymnast is wearing clothing that cannot fall down around her hands as she is swinging and her hair will not touch the bar while she is swinging.
- The bar itself should have no magnesium build-up on it and should be completely smooth. If there is mag on the bar this can act as a rough spot and 'catch' the gymnast's glove and prevent her hand sliding around the bar, which may lead to injury.
- NEVER use water or wet cloths to clean the bar. The bar must be completely dry.
- As a general rule use a foam pad around the bar, between the loops – the loops must not be touching the foam pad.
- Remind the gymnasts that they cannot 'half turn' their body and they just need to stay straight.
- Damaged or stretched loops should be discarded.

Putting on the loops with gloves



References

- Hutchinson J.J. Prevalence of wound infection under occlusive dressings: A collective survey or reported research. *Wounds*. 1989; 1:123-124.
- Nassar, L. (1998). The Treatment of "RIPS" on the Hands, *Technique*, May/June
- Neal RJ, Kippers V, Plooy D, *et al.* (1995) The influence of hand guards on forces and muscle activity during giant swings on the high bar. *Med Sci Sports Exerc*, 27:1550–6.
- Samuelson M, Reider B, Weiss D. (1996) Grip lock injuries to the forearm in male gymnasts. *Am J Sports Med* , 24:15–18.
- Yong-Hing K, Wedge JH, Bowen CV. (1988) Chronic injury to the distal ulnar and radial growth plates in an adolescent gymnast. A case report. *J Bone Joint Surg [Am]* 70:1087–9