



The CPR Kids First Aid e-Guide.

A PRACTICAL GUIDE TO BABY AND CHILD FIRST AID

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Disclaimer: This information provided herein is intended as a guide only AND is recommended for use in conjunction with up-to-date First Aid training. It is not intended to be, does not purport to be and does not replace expert medical help. It is also recommended that a First Aid refresher course be attended annually. The information given in this manual is intended solely for information. Any reliance by any person on any part of the information is solely at the risk of that person.

The information contained in this manual is compiled from a variety of sources, inclusive of the Australian Resuscitation Council and ASCIA. The information should not be considered complete and should not be used in place of a visit with, call to, or consultation or advice from your physician or other healthcare provider.

Introduction



"Trust me, I'm a nurse."

I find myself saying these words regularly to my children when they question whether I have the necessary skills to be removing splinters from their little fingers or patching up their war wounds (**Number One rule in our house is No Blood, no Band-Aid**). It isn't until I tell them stories about the children I help - such as the little girl who had a tree branch stuck in her leg, or the boy who stuck his hand in a blender while it was still plugged in - do they actually let me attend to their wounds. I can almost see their minds ticking over... "okay, maybe Mum *can* do this"!

I consider myself so very lucky that I have the skills and knowledge to help my kids (even if it takes a fair amount of coercion) so that when they do hurt themselves, I can treat their injuries effectively. I realise working in paediatric emergency care might give me the edge here, but I want to share my knowledge and experience with you so you know what to do too.

I have been a paediatric emergency nurse for over a decade and I feel blessed to have worked with some amazing clinicians in some equally amazing hospitals. I reckon I might have almost "seen it all" along the way. But still my mind boggles at what children can do to themselves. It seems the "I probably-shouldn't-do-this-because-the-outcome-could-be-very-bad" switch is missing in a lot of kids and as a consequence, many have a loyalty card in their nearest Emergency Department! On the upside, there have been countless times where I have seen parents apply First Aid to their children's injuries - usually with makeshift equipment (such as an eye patch made from a sanitary pad - great initiative!). They knew the difference good First Aid would make.

Nurses collect many stories over the years, but there are always a few that remain etched in my mind. I recall James* - three years old, active and curious. He was playing in his backyard while his Dad was in the kitchen, watching him through the window. It was winter and it had been raining heavily. James's Dad turned away for only a minute, and when he turned back, he saw James through the window, face down in a water feature in their garden - a shallow bowl that was still wide enough for James to fall into.

James's Dad was trained in CPR. He knew what he needed to do. He ran to James and pulled him out of the water. James was already blue after less than 60 seconds. His Dad started CPR immediately and after hearing shouts for help, neighbours called an ambulance. James was rushed to hospital, CPR continuing all the way. His little heart had stopped for over 60 minutes but the CPR, and of course the other medical treatment he received, saved his life.

After being resuscitated, James had a long recovery in hospital. Today, he is a healthy, active, bright boy with parents who are thankful every day for their son's life. James would have had a very different outcome had his Dad not known CPR. His brain would have lacked vital blood and oxygen which would have resulted in severe brain damage, or tragically, death.

It is imperative that all families learn the basics of First Aid and CPR.

You never know, the child whose life you end up saving might be your own.

Sarah.

PS You'll notice I refer to "your" child as "she" and "her". It's only because I have two daughters and I wanted to make the book easy to read. I hope you'll understand... boys, you are not getting away with anything!

Oh, and please visit our YouTube channel www.youtube.com/cprkidsTV to watch demonstrations of First Aid for kids and babies.

** Not his real name*



CPR

Cardiopulmonary resuscitation
is a skill every educator, parent
or carer must have.

CPR involves compressing the chest (and therefore the heart and lungs) to pump blood around the body and breathing air into the nose and/or mouth to inflate the lungs. CPR is performed when a person's heart has either stopped or is beating ineffectively. The aim of CPR is to keep blood (and therefore oxygen as it travels in the blood) going to the brain and other vital organs. If a person can be resuscitated, they have been given the best chance possible of having a good outcome.

Contrary to popular belief, CPR is not about bringing someone back to life. To be honest, you would be extremely lucky if the person wakes up while you are performing CPR on them. CPR is about keeping the brain and other vital organs well supplied with blood and oxygen. If the brain lacks blood and oxygen for even a few minutes, brain damage or death will occur.

Even though the principles of CPR are the same across all ages, the way it is performed varies according to age. When practising CPR, ages are generally broken down into three groups:

+ Baby (0-12 months) + Child (1-8 years) + Adult

There is a logical and easy way to remember the steps of CPR. Think of how your doctor might remember the basics of his job:

DRS ABCD – These letters stand for:

Danger
Response
Send for help
Airway
Breathing
Compressions
Defibrillator

DRSAB is about ascertaining whether or not somebody needs CPR and CD is the performing of the CPR and defibrillation.



Let's look at the different components of DRSABCD in turn:

D - DANGER

You must check for danger before helping your child. This is easier said than done because your parental instinct will kick in and you'll want to run to protect your child when she is hurt. But look at it this way: if you're hurt, you can't help your child. So check for danger first.

A good example of this is the story of the grandfather who saw his toddler grandson fall into a pool. Grandpa dived in after him, but couldn't swim. Mum then had to rescue both her son and her father. Luckily they were all fine, but it was the double whammy that mother didn't need! Despite his best intentions, Grandpa should have called for help, bless him.

Another example of this is when a parent runs out into traffic to rescue their child who has been hit by a car. Without thinking, the parent fails to look for oncoming traffic and is hit by another vehicle. Imagine being the one receiving the phone call from the Emergency Department saying your child and partner have been in an accident?

Take a second to make sure you are safe, for your child's sake as well as your own. Once you have made sure you are safe to help your child, move on to the next step. You also need to make sure that they are safe. If they are at risk of further injuries move them carefully.

R - RESPONSE

You need to know if your baby or child is responsive (conscious) or unresponsive (unconscious). The reason for this is that if she is responsive, she does not need you doing CPR. She might still be very sick and need an ambulance, lights and sirens all the way, but she doesn't need you doing compressions on her chest at that time.

If a baby or child is unresponsive, she'll be floppy and won't move or make a normal noise when you're stimulating her. Unconsciousness is different to



sleeping. Sleeping is a natural state that your baby or child can be woken out of (sometimes taking a lot of stimulation if she's in a deep sleep), whereas a baby or child who is unconscious doesn't wake up or make deliberate movements when stimulated. An unconscious child is usually very floppy and heavy.

Most First Aid guidelines will tell you that unless an injured person is in danger, you should leave them where they are while checking for a response. The reason for this is that you may exacerbate an injury if you move them. The exception to this is when you need to keep the airway open – more on that in Airway, over the page.

To check for responsiveness in your child, squeeze her shoulders firmly and give her a good tickle. Talk to her loudly – say “Sarah, wake up Sarah, can you hear me Sarah?”. Hopefully you are getting a cry, or she will be pushing you away or talking to you. This is good! She may still need urgent medical attention but she does not need you compressing her chest.

As a parent, I can't imagine leaving your baby in the cot and squeezing her shoulders to see if she is responsive. Pick up your baby, unless of course she has been in a car accident or a fall and you need to keep her still. While holding her upright in your arms and supporting her head, give her a good strong tickle on her ribs. Really stimulate her but do not shake her. Hopefully you are getting a cry. Crying is good. A crying child does not need CPR.



Check for response

A Mum in one of my classes told us of the occasion when her very young baby lapsed into unconsciousness. She said at first she thought he was just in a deep sleep but realised when she picked him up and tried to stimulate him, he was extremely floppy and did not give the little jerks that he normally did when he was picked up while asleep.

If your child or baby does not respond, that is, she is unconscious, you need to move onto the next step.

S - SEND FOR HELP

You need to get help any way you can, as soon as possible (see Calling 000). The important thing to realise is you need to stay calm and get help the fastest way possible. This may be getting someone who is with you to call an ambulance, banging on neighbours' doors, flagging down a passing car, or calling 000 yourself on your phone.

Most importantly, stay calm, talk clearly and make sure that the paramedics (the ambulance) can get to you. Don't forget to unlock doors, open gates and clear any obstacles so the paramedics can get to you quickly and safely.

Once you have sent for help, move on to the next step.

A - AIRWAY

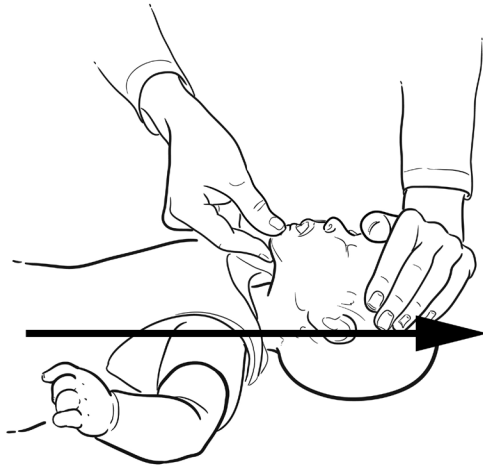
The airway is the windpipe or trachea. It's the tube that connects your nose and mouth to your lungs and it needs to be open. If your airway is blocked, you stop breathing and life ends. It's that simple.

For babies, the airway is soft and narrow. If your baby's head falls backwards or tips too far forward when she is unconscious, this can kink the airway and cause very big problems. The airway in babies is protected when they are healthy, even when asleep. When they are unconscious due to illness or injury, they lose this protection and can block off their own airway.

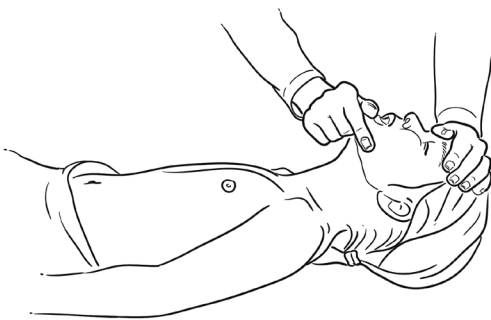
Have you noticed how babies and toddlers have large heads? This large head can flop forward when they are unconscious and block off the airway. Babies and toddlers also have large tongues. You can't actually swallow your tongue, however when unconscious due to illness or injury (not sleeping) the tongue flops back over the entrance to the airway, blocking it off. We need to position the unconscious baby to keep the airway open.

Before opening the airway, if a baby or child has an object or matter such as vomit visible in her mouth that you can see, roll her onto her side and if you can easily get it out, do so. If the object is right at the back, sweeping with your fingers may





Neutral position



Head tilt chin lift

push the object further down – so don't sweep in a baby! If she has vomit in her mouth, roll her onto her side, let it drain out and then roll her back.

Your baby's head needs to be placed in a neutral position in order to keep the airway open. This involves a manoeuvre called a head tilt chin lift. Put your baby or child on the floor (if she's not there already) provided it is safe to do so.

Move her head into a straight line with the rest of her body. A good way to understand this position is to try it on yourself. Sit upright with the nice straight yoga spine we should all have. Look directly forward. This is the neutral position you need to put your baby in. Once your baby's head is in the neutral position, using two or three fingers on her chin, lift it upwards towards the ceiling or sky.

Be careful not to press on the soft parts around her throat as this can also block the airway. The reason you need to lift her chin up is because this pulls her tongue forward, unblocking the entrance to her airway.

For a child, we need to put the head in a different position to a baby's. A child's head needs to be tilted back to open the airway. Using the head tilt chin lift, pull your child's head back. Using your

finger and hand, grasp the chin and lift it towards the ceiling. As for a baby, you are positioning the head and neck in a way that pulls the tongue forward to unblock the entrance to the airway

You need to remember that with an unconscious baby, child or adult, airway opening takes priority over an injury. Even if you suspect that your child has hurt her neck or spine, you still need to tilt her head back to keep her airway open. Yes, you might exacerbate her injury but if her airway is not open, she cannot breathe.

Airway is always the priority of any injury in an unconscious person **unless they have CATASTROPHIC, LIFE THREATENING bleeding (think amputated limb from a bomb blast, or a shark attack) because if we don't stop the haemorrhaging, there wont be any blood to circulate around the body when doing CPR. In that case, stop the bleeding then move on.**

Once you have the airway open, move on to the next step.

TIP: Watch our YouTube video on DRsABCD
www.youtube.com/cprkidsTV



B - BREATHING

While you keep holding the airway open, you need to check for breathing. You aren't looking for a complete absence of breathing because someone needing CPR may still take the occasional shallow gasp – and this doesn't count as breathing. You need to look for normal or abnormal breathing.

You know what normal breathing looks like – you see it every day on your child. When you watch a young baby breathe, you'll notice that they don't breathe regularly and their tummies rise and fall rather than their chest, as for adults and older children. When babies and children are breathing normally, they are pink (sometimes pale if they are unwell) but when they are breathing abnormally, they can turn blue very quickly, sometimes within 30 seconds of abnormal breathing commencing. This is one of the signs that a baby or child needs CPR.

If the baby or child is breathing abnormally, you might only see the occasional shallow gasp, or nothing at all. The baby or child will also be blue, which usually starts on and around her lips and spreads over her face and body. Her arms and legs will become mottled (the look your skin gets on a very cold day – splotchy or marbled). For babies and children with dark skin, you will see their lips, inside the mouth and nails turn blue.

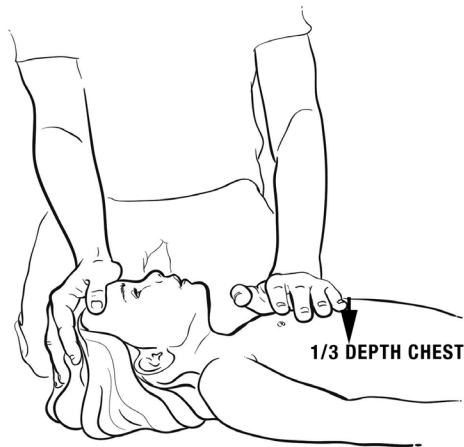
You may get to this stage and find that your child is unconscious but breathing normally. Think of a football player knocked out in the field – you don't see the medics rushing out and starting CPR. What you need to do is roll your child into the recovery position (see Recovery Position).

So, if your baby or child is unconscious, has abnormal breathing and is blue, you need to go on to the next step – commencing compressions..

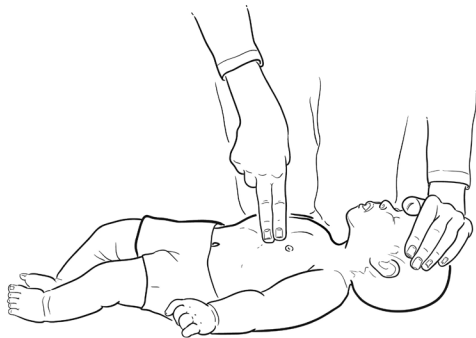
UNCONSCIOUS + ABNORMAL BREATHING = COMPRESSIONS

Don't do CPR on a conscious person. Not only will they be very cranky with you because it hurts, and if they are conscious they just don't need it at that time.

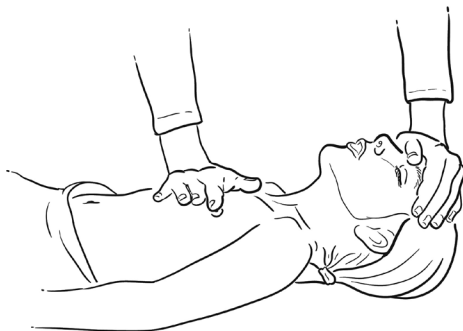




Compression depth on chest



For a baby use two fingers



For a child use one or two hands

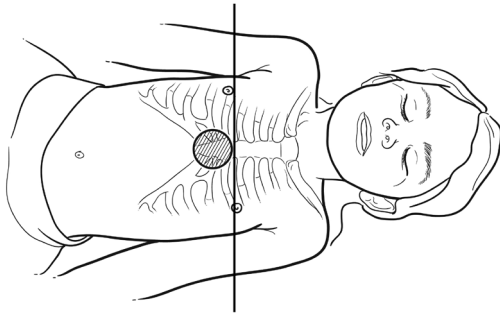
C - COMPRESSIONS

The aim of doing compressions is to compress the rib cage over the heart **and lungs** to force the blood out and circulate it around the body. As you release the compression, you allow the rib cage to come up, allowing the heart to fill with blood again. And repeat!

One of the most common things to go wrong in CPR is that the person performing the compressions does not go deep enough. It is very important to ensure that you compress one-third of the depth of the chest. This could be three centimetres on a baby, four centimetres on a child and a minimum of 5 cm on an adult.

When performing CPR, the correct position for your hands is on the lower half of the breastbone (otherwise known as the sternum). If you are not strong enough to achieve one-third of the depth of the chest with one hand, use two. The important thing to note is that it is about compressing one-third of the depth of the chest, so my suggestion to use one hand is a general guide.

To compress the chest, put your baby or child on the floor. You must have a hard surface under your child or you will not be able to compress her chest deep enough.



Position to do compressions

If your baby or child is on a soft couch, for example, you will bounce her rather than achieve a decent compression depth.

Place your fingers or hand/s on the lower half of the breastbone. A good way of finding this in a baby or child is to imagine a line running across the chest

between her nipples. This is the middle of the sternum. Put your hand just below this line for the compressions. For obvious reasons this does not work on adults, particularly women!

When you are ready to start compressions, kneel closely to the baby or child, put your fingers or hand in position and lock your elbows. Don't make your arms do the work; use your body. You will find that you can continue compressions for much longer this way. If you lean back and make your arms do the work you will tire very quickly and your compressions will not be effective. Compressions should be smooth and rhythmic, however they are not easy, especially on an adult. It is a big physical workout and very tiring.

It is very important to make sure you let the chest come all the way up between compressions to allow the heart to fill up with blood again.

You need to aim for 100-120 compressions per minute (almost two compressions per second). Coincidentally, this is the rhythm of the Bee Gees song *Stayin' Alive* or *Baa Baa Black Sheep*. For all our friends in the UK, *Nelly the Elephant* will also work. This compression rate is the same for babies, children and adults

Depth: 1/3 depth of the chest

Speed: 100-120 compression per minute (*Stayin' Alive*)

Position: Lower half of the breastbone

Ratio: 30 compressions to two breaths

We need to put some breathing in there too.

In other countries around the world 'mouth-to-mouth' has been taken out of resuscitation. It is now compression-only resuscitation. There is medical evidence to show that an injured adult who is close to help (say, in a metropolitan setting) will benefit from compression-only resuscitation as there is enough oxygen already in the blood to supply the brain. Mouth-to-mouth is not an easy thing to do and the evidence shows that we should not waste time attempting this. Rather, it is better to keep the blood circulating with compression-only resuscitation.

That said, in Australia we are still doing breaths for a few reasons. First, much of our population is rural so it can be some time before help arrives. In this situation, breaths are valuable. Second, there is a lack of evidence to state that compression-only CPR is okay in babies and children. The current thinking is that **babies and children do require breaths to be given via mouth-to-mouth or mouth-to-mouth/nose.**

My view is that if you can do breaths, do them. If for some reason you can't, for example if you are heavily pregnant, you have breathing difficulties, or if the person is injured and covered in blood, protect yourself and do compressions only.

Rather than doing mouth-to-mouth resuscitation on babies and toddlers, it is much easier to do mouth-to-mouth and nose resuscitation. This involves putting



Mouth-to-mouth on child

your mouth over the mouth and nose, making sure you have a good seal. You can use this method on a baby until she is too big for you to get a good seal over the top of her mouth and nose. For a child who is too big for you to do this method, you will need to do mouth-to-mouth. When you do mouth-to-mouth breathing, don't forget to block off the child's nose. If you breathe into her mouth without blocking off her nose, the air will come straight out of her nose rather than Mouth-to-mouth on child going into her lungs! Another important thing to remember is to keep her airway

open using the head tilt and chin lift. Remember, if the airway is blocked or kinked, the air will not go into her lungs.

Think about the size of a baby or child's lungs in relation to yours. An adult's lungs are substantially bigger. As a general guide, a newborn needs only a puff of air; a baby needs the contents of your cheeks (purse your lips and puff out your cheeks like a bullfrog – looks silly but that is about how much air is needed to inflate a baby's lungs) and a child will take more, depending on her size.

Once you have opened up the airway and blocked off her nose (if not doing mouth-to-mouth and nose) put your mouth over hers and ensure a good seal. Breathe into her mouth. As you are doing this, watch her chest. If you see it rise, you have delivered enough air. Take your mouth off to let her breath come out, then repeat. Give two breaths and then recommence your compressions. If you are turning beet red and forcing air in, it is probably too much. You don't want to cause lung damage so ease off on the force of your breath.

The ratio of compressions to breaths is 30:2. Remember it is two attempts at breath – don't waste your time doing extra breaths if you think the first ones haven't worked. The most important part is the compressions.



Look at their chest/tummy

TIP: If you are doing compressions and you aren't on your own, swap over regularly to prevent fatigue.

Mouth-to-mouth (and nose):

- + Open the airway using the head tilt and chin lift
- + Ensure you have a good seal over the area
- + Breathe into your child or baby until her chest starts to rise.
- + Take your mouth off to let her breath come out
- + Repeat for second breath
- + Ratio is 30 compressions to 2 breaths

In a metropolitan setting, it is unlikely that you will become too exhausted. You will have adrenaline running through your body to help keep you going. The most likely scenario is that the paramedics will arrive and take over.

It is really important that you learn hands-on CPR. Even though you will gain an understanding from reading this book, nothing replaces the hands-on practice. Pick a course where you get lots of practical time on baby and child mannequins so you can get a feeling of how it is to perform CPR on a baby or child.

This will help commit the information to your memory so that in an emergency, you will be able to recall what to do, and do it well.

BASIC LIFE SUPPORT

D Dangers?

R Responsive?

S Send for Help

A Open Airway

B Normal Breathing?

C Start CPR

30 compressions: 2 breaths
if unwilling/unable to perform rescue breaths
continue chest compressions

D Attach Defibrillator (AED)

as soon as available
and follow its prompts

**Continue CPR until
responsiveness or
normal breathing returns**

D - DEFIBRILLATOR

Automated External Defibrillators (AEDs) – you know, in the movies where they yell “Stand Clear!” and give the patient a shock to put their heart in the right rhythm – those things.



AEDs are now in many public places including shopping centres, office buildings, train stations and gyms, just to name a few. AEDs save lives, and if available should always be used in conjunction with DRSABCD. You do not need to be trained to use a defibrillator. If an AED is available, don't hesitate to use it. Follow the pictures and prompts on the box and listen to what the machine says as it will prompt you and tell you what to do. A defibrillator can be used on adults and children of all ages. There are no longer any age restrictions, they can be used on babies. Just make sure the pads are not touching. If you are by yourself, don't stop doing compressions to retrieve a defibrillator,

but please do get one if there is more than one person present; one to do compressions and one to attach the AED.

Make sure you attach the sticky pads to bare skin, and just listen. The AED will tell you what to do and will only give a shock if the person actually needs it - it is automated!

WHEN DO YOU STOP CPR?

- + When your baby or child starts responding to you (becomes conscious)
- + When medical help arrives and takes over (most likely scenario)
- + When you are too physically exhausted to keep going
- + When a medical practitioner declares that CPR should be ceased
- + When an AED tells you to stop

RECOVERY POSITION

The recovery position is the position in which you should place an unconscious or semi-conscious child who is breathing normally. Placing your child on her side drains vomit or other fluid out of her mouth and keeps her airway (windpipe or trachea) open to help with breathing while you wait for medical help. There are many ways to do this, however it's important you're gentle if you are concerned your child may have a neck or back injury.

No matter which way you roll your child, the important points to remember are:

- + She should be on her side
- + The position should be stable
- + Avoid pressure on her chest
- + Be aware of the need to roll her gently in case of spinal injury
- + Be able to closely watch her
- + The position should not injure her



Summary

The following method is for a child over the age of one or who is too heavy for you to hold safely:

1. Place her hand under the side of her face
2. Move her other arm away
3. Lift your child's knee and place your hand under her shoulder
4. Roll her gently away from you
5. Lift her knee up to 90 degrees
6. Position her hand under her face and ensure the airway is in the right position

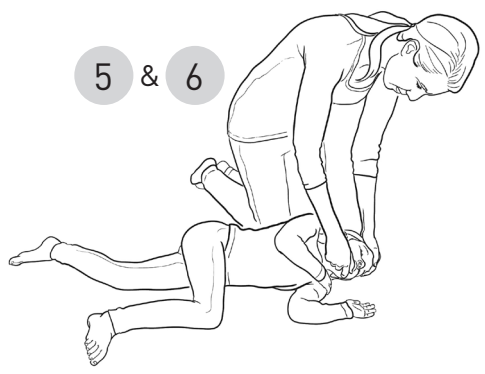
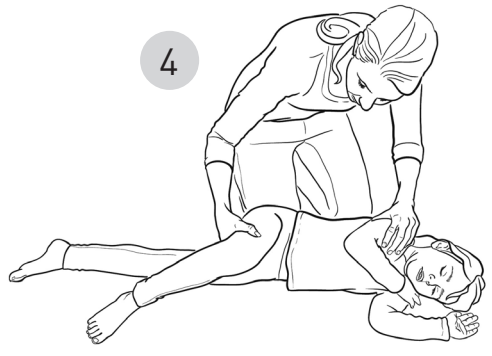
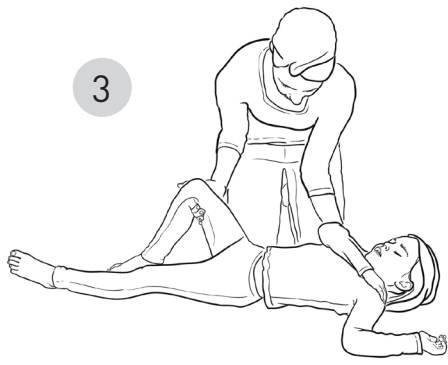
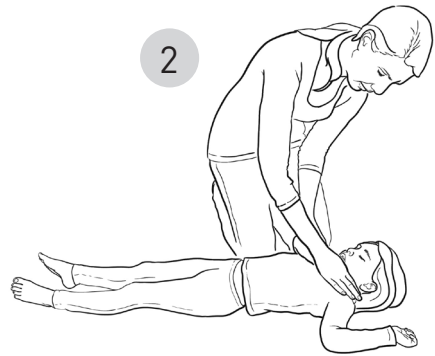
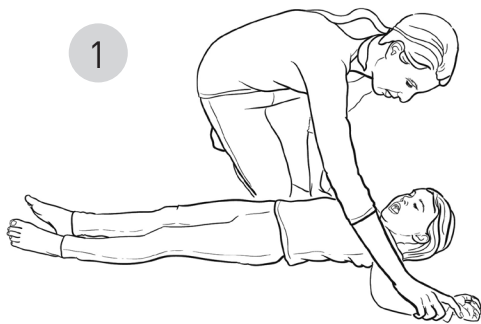
Recovery position for a small baby less than one year old and light enough to safely hold (be aware she will be heavy and floppy when unconscious) Watch our YouTube video on the Recovery Position:

1. Pick up your baby carefully
2. Hold her jaw with your hand and place her body tummy down along your arm
3. Keep her head in line with her body - the neutral position (see CPR)
4. Make sure she is facing downward



Recovery position

www.youtube.com/cprkidsTV



Recovery position for a baby

BLEEDING

Abrasions (grazes)

Grazes are one injury almost every child is guaranteed to have. Kids come off skateboards, bikes, scooters – basically anything that can move will attract a child. They climb on it, fall off it and lose some skin in the process. Even though grazes are usually minor, they can be very painful and occasionally quite dirty. First, the dirt needs to be removed. One of the best ways to do this is to put your child in a warm bath. Wash out the dirt – using a soft flannel is a good way of doing this. Unfortunately you need to be a mean parent and make sure the wound is clean, even though they will be protesting. You don't want the wound to end up infected. Much better for a few minutes of yelling and a nice clean wound than an infected one. Don't scrub too hard; this can cause more trauma to the wound and a whole lot of pain, not to mention noise.

Pat the wound dry with something that doesn't shed fibres – you don't want fluff sticking to the graze. Try to apply an antiseptic of your choice. Wounds heal better in a moist environment, however getting a toddler to leave a dressing in place can be quite tricky. Ideally, applying a wound healing gel or something like papaw cream over the graze before applying a non-stick dressing will promote healing. Just remember, the dressing will need to be changed if it gets wet. If you have a child who will not tolerate a dressing, be aware of things like clothes and sheets sticking to the graze while it dries out. As it heals, it will become itchy. Kids will then pick at the scab which can cause scarring and further bleeding. They need to be encouraged to leave it alone!

The symptoms of infection that you need to look out for include:

- + Redness and/or swelling around the wound
- + Pus coming from the wound
- + 'Flu-like symptoms
- + Fever
- + Excessive pain
- + The body part affected is hot to touch in comparison to other parts of the body

You need to get medical help if your child has any of these symptoms as antibiotics may be needed.



Summary

- + Wash the wound with water and remove dirt
- + Apply the antiseptic of your choice and a non-stick dressing if needed
- + Look for signs of infection
- + Seek medical help if you are concerned

Amputations and crush injuries of digits

Little fingers are very curious, and this can often lead to injuries. Crushed fingers in doors are a common injury in young children. Door hinges exert a great deal of pressure, more than enough to crush or amputate the tip of a child's finger. Car doors are also a popular place for kids to get their fingers caught.

As for lacerations, you need to apply firm direct pressure to the finger with something clean and dry. Ideally this should be sterile gauze out of your First Aid kit, however anything clean and dry will do. Call an ambulance 000. You will then need to look at the finger to see if any part is missing.

Once the bleeding is under control, you will need to collect the part that has been amputated. Wrap the amputated part in some damp (NOT wet) sterile gauze and seal it in a plastic bag. A zip lock sandwich bag is ideal. If you don't have any sterile gauze, paper towel is a good option, just make sure whatever you place it in is not wet, just either damp or dry. If the amputated part is very dirty, gently rinse it under some running tap water. Place the sealed bag on an ice slurry. A slurry is water with ice.

Do not put the amputated part straight onto ice as this will cause more damage and reduce the viability of it for reattachment. A good way of doing this is to put water and ice in a plastic container, cup or another zip lock bag, then put the sealed bag with the amputated part into the slurry.

It is vital that the amputated part remains with the injured child. I have heard lots of stories of how people have become separated from their body parts in transit to the hospital!



Children who have a crush injury or an amputation **of a digit** usually need to have an operation, not just to repair the wound, but also for a thorough wash out to prevent infection. I am constantly amazed by the plastics surgeons and what they can successfully reattach, so even if you are unsure about whether it is worth bringing the amputated part, bring it anyway, just in case.

TIP: watch our YouTube video
www.youtube.com/cprkidsTV.



Summary

- + The priority is to apply firm direct pressure to stop the bleeding
- + Call 000
- + Recover the amputated part and rinse gently under tap water if dirty
- + Place in damp (not wet) gauze or paper towel and seal in plastic bag
- + Place on ice slurry
- + Amputated part to remain with the injured child



Lacerations

Lacerations are defined as tearing of the body tissue, such as skin from a blow, impact or other injury. Small children are very cleverly designed for impact. With big heads and thick skulls (no offence to the kids), they can whack their heads and not end up with a brain injury. However, kids tend to be prone to lacerations and the most common places for these are over the forehead and below the chin; the points of impact.

It is usually the force of the blow that causes the skin to split, and the blood flow from a small head wound is usually substantial. On many occasions, I have seen a child come into the Emergency Department clutching a blood soaked tea towel for dear life over the top of the wound, frightened that the body part they are pressing onto may fall off if they let go! Then after some cajoling and/or bribery, the nurse removes the tea towel only to find that the cut is less than a centimetre long. Heads bleed and bleed because they have a large blood supply. The key to stopping the bleeding is pressure.

In First Aid, the key response to bleeding is to stop it. The best way to stop a wound from bleeding is by applying firm, direct pressure with something clean and dry for a minimum of five minutes! For the parents of a bleeding, screaming toddler, this can feel like two hours. Use any material that is clean and dry. Apply very firm pressure over the **source of the bleeding - a rolled up bandage to pinpoint the pressure is great, then secure into place with another bandage, teatowel etc. Don't just hold a towel over the wound, that just soaks up the blood, it doesn't stop the bleeding.**

Once you have applied firm pressure over the wound for five minutes, remove the tea towel or whatever you have used, and look at the wound. Is it gaping? Can you see deeply into the wound? Can you see fatty tissue, muscle or bone? If yes, it may be necessary for your child to have some stitches or glue. Don't give your child anything to



eat or drink before going to your nearest hospital or GP in case she needs to have surgery or even some nitrous oxide (laughing gas) to make the experience a little more bearable.

If you notice that the blood is spurting (like a pulse), apply very firm pressure and call an ambulance 000 – it is likely to be an artery that has been damaged and this is a medical emergency. This is also the reason you never pull anything out of a wound that may be deep. Of course, small intrusions such as minor splinters need to be dug out, but anything deep must be kept in place, stabilised and medical attention sought.

I remember a young Superman by the name of Jacob who injured himself falling out of a tree onto a branch below. A stick the size of a ballpoint pen went into the back of his leg. His parents knew First Aid and understood that they should not pull the stick out, rather, the better option was to stabilise it, apply pressure and get help. The parents wrapped two **rolled up** tea towels around the base of the stick and applied a bandage to keep it in place. This stopped the stick from wobbling around and also applied **direct** pressure around the wound to stop it bleeding. They couldn't put Jacob into his car seat so they called an ambulance. Jacob needed surgery to remove the stick, and was very lucky his parents did not pull it out as it had severed one of the major blood vessels behind his knee. The stick was acting as a plug.

Jacob would not have bled to death in seconds or anything as dramatic as that if they had pulled it out, however it could have caused more damage and he would have suffered significant bleeding.

If the wound is minor, clean it with some saline or water, ensuring all the dirt is out of the wound and apply the antiseptic of your choice. Then cover if needed. Remember, common sense is key. If you are concerned about the wound, seek medical help.

Using Steri-strips or “butterfly” Band-Aids can be very useful. Most kids love having Band-Aids applied, so keep plenty in stock!



Summary

- + Apply firm direct pressure over the wound with something clean and dry
- + Keep pressure on for five minutes
- + If blood is spurting from the wound, apply firm direct pressure and call 000
- + Don't pull out anything that could be deeply embedded in a wound – stabilise it and seek medical help
- + If gaping, dirty, long or deep – seek medical help
- + Don't give your child anything to eat or drink
- + If the wound is minor, clean it, apply antiseptic of your choice if necessary and cover



“As your child grows, have you ever wondered about the little things you could do around the house to keep her safe?”

May I suggest the decommissioning of all coffee tables until after your child reaches school age?

Coffee tables seem to be the perfect height for toddlers to cruise and play – there is a natural attraction! However, you should know that coffee tables are frequently implicated in a variety of toddler injuries as they cruise, climb and explore. Injuries include eyebrow, forehead, scalp and chin cuts, lip lacerations and dental injuries, burns from hot drinks and foods, falls, choking on or swallowing small hazardous items such as coins – even the odd alcoholic drink. Reduce the risk and make supervision easier!”

Glenda – Paediatric Nurse Practitioner

Nose bleeds

Nose bleeds can be very common in children and it can look like they have lost a fair amount of blood. However it often looks much more than it actually is. Nose bleeds can be caused by knocks to the head or nose, picking, inserting objects up the nose, dry air, allergies or infection. Nose bleeds are common and can usually be managed at home. The bleeding happens when the fragile blood vessels in the nose burst.

If your child has a nose bleed, keep her calm. Crying increases pressure and will make the bleeding worse. Get her to lean forward and pinch off the nostrils with firm pressure. Apply a cold pack or cold face washer to the back of her neck and forehead. This causes the blood vessels to shrink which slows down the flow of blood. Keep applying the cold pack with pressure for ten minutes.

Once the bleeding stops, it is very important to stop your child from blowing or sniffing her nose for at least 15 minutes. This is a hard thing to do as clots in the nose feel awful. You also need to stop her picking. Your child may vomit blood after a nose bleed if the blood has been running down the back of her throat and she has swallowed it. Don't worry, this is normal. If her nose does not stop bleeding or if the nose bleeds are frequent, seek medical help.



Summary

- + Keep your child calm
- + Lean her forward
- + Pinch her nostrils and ask her to breathe through her mouth
- + Cold compress over her neck
- + Hold for 10 minutes
- + Do not sniff, pick or blow nose for at least 15 minutes
- + Seek medical help if the bleeding does not stop

BURNS

Burns are defined as injury to tissues caused by contact with heat, flame, chemicals, electricity or radiation and are one of the leading causes of injury in children, especially toddlers. Hot water scalds are very common – an inquisitive, thirsty toddler being taught to drink from a cup will reach for her drink, regardless of the temperature of the contents. It is critical you are aware of this.

The most important part of First Aid for burns is to cool with cold running tap water for a minimum of 20 minutes.

Yes, 20 minutes seems an incredibly long time, especially with a toddler, but it's exactly what you need to do. It is imperative you get water onto the burn as soon as possible as it will not only help with the pain but it will help to stop further damage occurring to the skin. Even if there is no water available at the time, you should still cool the burn with water as soon as it is available.

Babies and children burn at much lower temperatures than adults. A good way to minimise scalds is to turn your hot water system down to 50 degrees Celsius. Most hot water systems are set at around 70 degrees Celsius. It only takes a second to burn a child with water at this temperature.

Apart from the obvious causes of scalds such as hot drinks, pulling the handles of saucepans off the stove, sunburn, hot water from the bath and so on, be aware of other sources. Don't drink hot drinks with babies in your arms – I have seen children in carry pouches have hot coffee splashed on their heads when the lid on the take-away coffee has fallen off. Be aware.

Burns are also extremely painful, particularly partial thickness burns. Burns used to be described in degrees – first, second and third – currently they are described as superficial (affecting only the superficial layers of skin), partial thickness (affecting down to the underlying layers of the skin) and full thickness (affecting all layers of the skin). It may not be possible to see how deep the burn is until a few days after the incident. Give your child some pain relief such as paracetamol. The hospital or ambulance will also give your child some pain relief medication. Full thickness burns may not hurt as the nerve endings are so badly damaged.

I recall Molly, a two-year-old girl, who pulled a freshly brewed cup of tea onto herself off the kitchen bench. Her Mum immediately removed Molly's clothes, put her under the shower, and called an ambulance. Luckily, Molly's mum also removed her nappy. Nappies soak up the hot water and retain heat which can create genital burns. Always remove the nappy!

Of course we are not always near running tap water when a burn occurs. You may need to improvise. Do you have a bottle of water? Is there a tap at the park? An irrigation system? I know of a child who burnt his leg on the exhaust of the motorbike he was riding on an outback property. His Dad put him in a nearby dam, soaked his jumper in the water and kept it on the burn until they reached the house where he then put him in the shower. If you do put the child's burned area into a sink or bowl of water, it is very important to change the water regularly as the water will quickly heat up and become ineffective.

Flame burns, such as those from campfires, candles and matches are also a source of serious injury in children. Remember to first *Stop, Drop and Roll*. *Stop* moving, *Drop* to the ground, *Roll* to extinguish the flames and then *Remove. Cool. Cover. Seek.* as outlined next.

The Centre for Children's Burns and Trauma Research, based at the Royal Children's Hospital Brisbane, recommends this four-step approach for the First Aid treatment of children's burns:

1. REMOVE

Quickly remove any clothing and jewellery from the burned area. If your child's clothes are stuck to her skin, do not remove them and do not pop any blisters. It is important to remove clothing and jewellery because they can trap heat onto her skin and can restrict blood flow to the area if it starts to swell.

2. COOL

Immediately treat the area with cold running water (such as from a cold tap) for a minimum of 20 minutes. During this time, only apply the water to the burned area. Keep your child warm with a blanket or by holding her so that only the burned area is under the water and your body heat is keeping the rest of her warm.

3. COVER

Use cling wrap or a clean cloth to cover and protect the burned area. Do not use ice, creams, oil or other substances. They will not help the wound to heal and they may cause infection or more damage. They will also interfere with the doctor's examination.

4. SEEK

Seek medical attention for all children's burns by calling the ambulance or going to hospital. For adults, if the burn is larger than a 50 cent coin, it is on the face, hands or groin area or if the burn is white in colour (this means it is deep), seek medical attention.

Electrical burns

Always make sure you are safe first before you touch the patient! Turn off the electricity using a wooden object or the safety switch so that you are not electrocuted or burnt as well. Then *Remove. Cool. Cover. Seek.*

Chemical burns

Use a cloth to brush off any chemicals on the skin – do not use your bare hands. Then *Remove. Cool. Cover. Seek.*

Sunburn

If the sunburn is extensive, put your child in a cool shower, otherwise cool the area with cold water for 20 minutes. If the sunburn covers a large area, is in delicate areas or your child feels unwell or sick, seek medical attention. Also seek medical attention if she is a young baby. Remember, with sunburn, prevention is better than cure.



Summary

- + For flame burns: *Stop. Drop. Cover. Roll.*
- + Remove clothing unless it is stuck to the skin, including the nappy
- + Cool the burn with cool running tap water for 20 minutes minimum
- + Cover the burn with cling wrap or a non-stick dressing
- + Seek medical help
- + You can apply First Aid for up to three hours after the burn, and it will still be effective

TIP: Keep the hair straighteners out of reach. They are another common cause of burns to little hands.



CHOKING

As a general rule, kids and babies can choke on anything that fits inside an “old school” film canister. For anyone who has never used anything but a digital camera, imagine a rubberised mobile phone rolled up and you’ll get the picture. This means a lot of everyday objects are fair game for a would-be choking incident.

Toddlers will try to give bigger objects a go too. Choking is defined as when a person’s airway (windpipe or trachea) is completely or partially blocked.

Babies can gag on milk, particularly if the flow is too fast. Often if you are breastfeeding and you have a fast letdown, your baby can get too much too quickly, causing her to pull off the breast and cough. Sometimes babies can go quite red and cough for a period of time, but usually this resolves quickly and the hardest task is to calm them down to get them latched back on again. You don’t usually need to intervene, just sit your baby upright, leaning forward slightly or hold her face down, supporting her jaw.

Older babies love to gag when they start to eat solids. Gagging is different to choking. It’s when your child opens her mouth and pushes her tongue forward. This can be a reaction to simply having something in her mouth (or it might just be your cooking!). Stand back!

The gagging reflex in babies can be quite sensitive until they get used to swallowing food. They may cough and turn red, but usually clear the offending piece of food quickly and continue eating. Remember, gagging is normal.

As mentioned above, choking happens when the airway is either completely or partially blocked. If partially blocked, your baby will start to cough to clear it, which is usually very effective. If the airway is completely blocked, your baby may not be making any sound and will be unable to cough effectively. This is when you need to intervene very quickly with back blows and chest thrusts.

Older children tend to choke on food and objects particularly if they happen to be running while eating. One little stumble and down it goes. If your child or baby has what we call an **effective cough**, don’t intervene, let her clear it herself. An effective cough means that a child is able to take a big breath of air in and then a strong,

forceful cough out. This is the body's reflex, or defence mechanism. The idea is that we expel the air out of our lungs at high speed to pop out the offending piece of food or object. It is very tempting in this situation to whack a child on the back, however if you whack her while she is taking a big breath in, the object might dislodge and go further down, potentially completely obstructing her airway.

In my paediatric emergency nursing career, I have certainly seen lots of children who have had choking episodes. Luckily, the majority come in on the ambulance stretcher breathing well, with Mum and Dad in tears because the child has turned blue and choked at home. Back blows were given and the object has come flying out but the shock of their child choking is all too real. Back blows can be very effective.

Often people think the Heimlich manoeuvre is the way to go for a choking child but I urge you to resist the temptation. Just don't do it! In a young child, it can cause damage to the internal organs so stick to back blows and chest thrusts as discussed next.

An object can often get lodged in the oesophagus (food pipe) too. This is still a medical emergency. Symptoms include the inability to swallow and excessive drooling. I recently saw a six-year-old who had been running with a dollar coin in her mouth and stumbled (she said she didn't have a pocket to put it in). Down it went. It lodged in her oesophagus, very close to the entrance to her airway. She was able to talk but couldn't swallow her saliva, so she was drooling copious amounts.

She went quickly to the operating theatre to have it removed under a general anaesthetic. Let's hope she doesn't substitute her mouth for a pocket any more!

TIP: Always cut grapes into quarters. They are the perfect size to get stuck in an airway.



First Aid for Choking

First Aid for choking is divided into three sections:

- + Unconscious
- + Conscious with effective cough
- + Conscious and ineffective cough or silent

UNCONSCIOUS:

If your baby or child is unconscious, you need to remove the food or object from her mouth ONLY if you can grasp it easily. There is the very real danger of pushing the food or object further down, so only try to get it out if you can easily grasp it. Finger sweeps are not recommended in babies for this reason.

Call for help 000 and follow DRSABCD.

CONSCIOUS WITH EFFECTIVE COUGH:

As I describe earlier, an effective cough is when a baby or child is able to take a big breath in and forcefully cough out. The idea is that the forceful cough will 'pop' the object out.

Remember: If a baby or child has an effective cough, no matter how tempting it is to whack the child on the back, don't do it. If you hit her on the back while she is taking a big breath in you might dislodge it while she is taking that big breath and she will then inhale it further, potentially making more of an obstruction.

Stay with your child, comfort her and encourage her to keep coughing. She will probably vomit and this is okay. Watch your child like a hawk because if her cough becomes ineffective, you need to intervene with back blows very quickly.

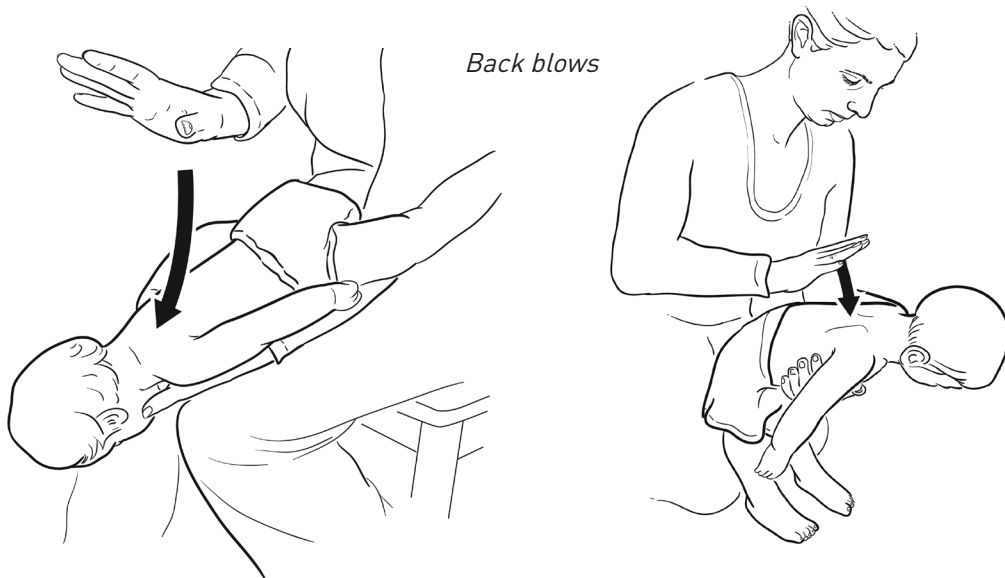
CONSCIOUS WITH AN INEFFECTIVE COUGH OR SILENT:

This is very scary, both for the choking baby or child and the parent. If your child or baby is not able to cough forcefully, or she is silent (VERY scary), you need to intervene very quickly.



If your baby is conscious with an ineffective cough, pick her up and place her tummy down along your leg, whilst supporting her. Having her pointing down uses gravity to assist you. Pull your arm back and give her a forceful blow between her shoulder blades. This is called a back blow. The idea of the back blow is not to whack her just on the back, but push the air forcefully out to pop out the food or object.

Give up to five back blows.

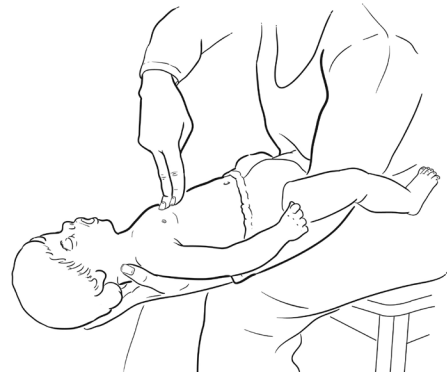


If this does not work, turn your baby over onto her back. While supporting her head, push down with two or three fingers in the middle of the breastbone in line with the nipples (same place as CPR) in a thrusting motion. This is called a chest thrust.

Give up to five chest thrusts. If this does not work, go back to five back blows and continue to alternate until the obstruction is cleared (she will probably vomit too) or your child becomes unconscious (then you follow DRSABCD).

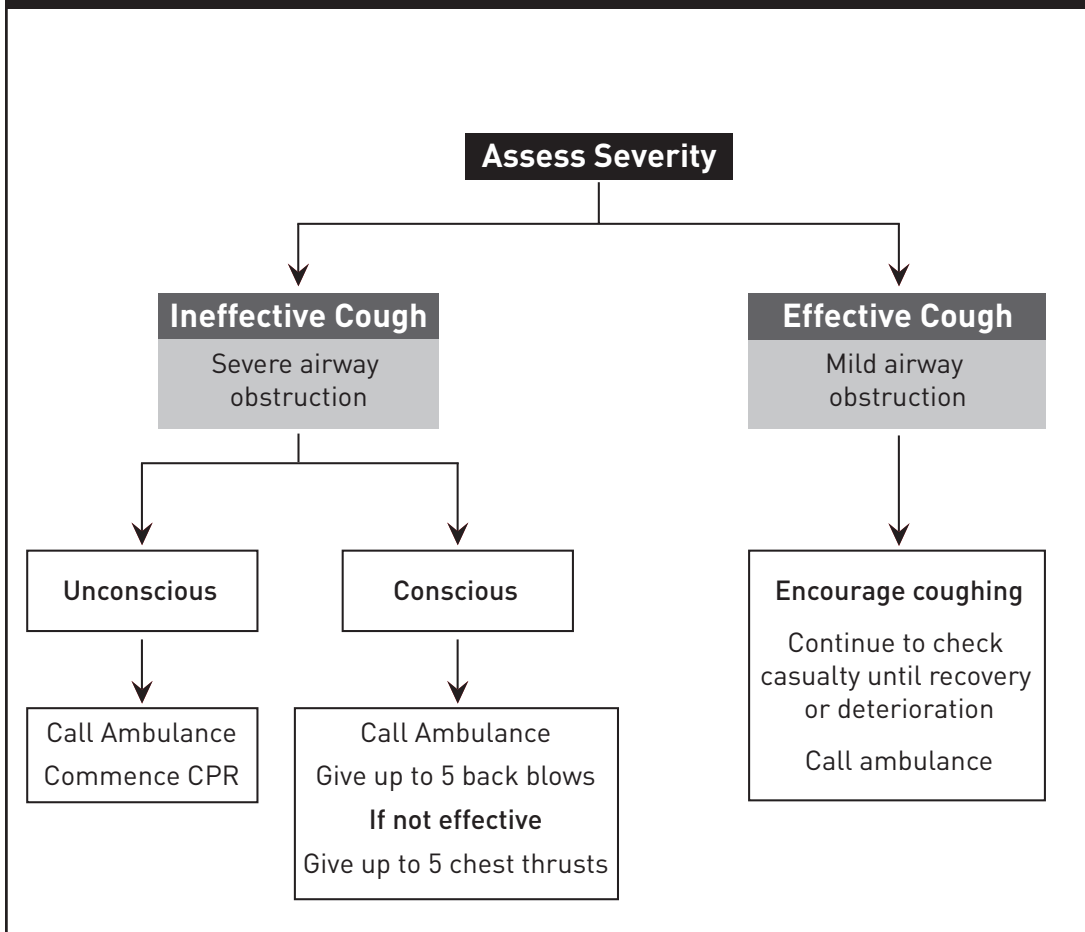
The same procedure is followed for older children. If your child is too heavy to place down along your leg, stand her up and tilt her forward. You will need to brace an older child with your arm for the back blows and support them for chest thrusts. Hopefully the movement up and down may help to dislodge the object.

TIP: watch our YouTube video
www.youtube.com.au/cprkidsTV



Chest thrusts

Management of foreign body airway obstruction (choking) from the Australian Resuscitation Council



HEAD INJURIES

Have you ever noticed how big toddlers' heads are? They are seemingly disproportionate to the rest of their little bodies. A toddler's head can be one-third of the size of their body – quite large in comparison to an adult!

A head injury is defined as a knock or bump to your child's head resulting in bleeding, lumps, bumps or bruises to the head. It is unusual for a toddler to become unconscious (knock themselves out) from a bump to the head. If the impact is big enough to knock out your child, you need to seek urgent medical help.

Minor head injuries tend to occur when a child hits their head and they end up with a swelling or 'egg' at the point of impact. A minor head injury may make a young child cry for a few minutes but then quite happily carry on with whatever they were doing. Their behaviour will be perfectly normal. You can try to apply an ice pack to the swelling, however many kids will not tolerate this – a cold face washer will work just as well.

If your child has had a head injury just prior to bedtime and she is not showing any of the above signs, it is okay to let her go to sleep. You do need to make sure you can wake her up easily though, so check on her ten minutes after putting her to bed to make sure you can wake her. You should then check on her regularly for a couple of hours. Always go with your gut instinct - if you are worried, seek medical help.

A boggy swelling is a lump or swelling that is spongy or squishy to touch. If you can feel this, it is very important to seek urgent medical help as this can mean there is significant bleeding. It is difficult to ascertain if a young child has blurred vision, however often they will reach out for an object and you will see they are reaching next to it rather than being able to grasp it immediately.

I remember one little girl called Amelia who was prematurely ageing her parents with her love of jumping off very high things. One day she decided it might be fun to jump from the staircase to the couch and miscalculated the distance (as young children tend to do). She landed face first onto timber floorboards. Amelia did not lose consciousness but her Dad described her as "stunned" for around ten seconds before she burst into tears. She didn't appear to have any lumps, bumps or bruising, however her behaviour was not right. Her Dad said that she wasn't her normal self; she was sitting on the couch very quietly, not moving for around

30 minutes. This concerned her parents so they brought Amelia to the Emergency Department. On her way to the hospital she started vomiting. Amelia needed to be watched in the Emergency Department for a few hours, but was then sent home as she was back to her usual self, tearing around and playing.

Amelia's parents did the right thing taking her to hospital. Symptoms such as Amelia's signify potential for a head injury which most certainly needs to be assessed in hospital.



Summary

If your child has any of the following symptoms after hitting her head, you must seek urgent medical help:

- + Vomiting
- + Drowsiness without it being her normal sleep time
- + Blurred vision
- + Dizziness
- + Unusual behaviour
- + Seizure
- + Boggy swelling to the area of impact
- + Confusion
- + **Clear fluid from ear/s or nose**
- + Headache
- + Any changes to the area of impact or her behaviour that create concern for you