



# HEMOACTION

PLAYING AND LEARNING  
ABOUT HEMOPHILIA

## INSTRUCTIONS

**PROJECT:**  
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My husband Cazé Pecini who dreams with me.

The cards for this game have a story to tell about important things you should know about hemophilia. Hemoaction offers various games, such as:

1. The Question and Answer *GAME* (for at least 2 people). One child asks another what each picture means. Whoever has the most right answers wins.

2. The Memory *GAME* (for 2 or more players):

The object of the game is to find the highest number of pairs by using your memory. The one who finds the highest number of pairs wins.

The cards are shuffled and spread out face down. The first player turns over any two cards. If they're the same, he picks them up and plays again. If they're different, he leaves them where they were, face down.

The next player turns over two other cards, and so on. Whoever has a good memory and pays attention will remember where the identical cards are.

3. THE "RUNNER" *GAME* (for 2 or more players):

The object is not to have the "runner" card in your hand at the end of the game.

This card has a picture of a boy running away from his hemophilia treatment, and it's the only one without a number. The 53 cards (26 pairs and one "runner") are shuffled and dealt to the players. Each player puts the pairs he received on the table. The first player is the one with the most cards in his hand. He begins by picking a card from the child to his left. If the card he picked makes a pair with another card in his hand, this new pair should be placed on the table. If he picks the "runner" card or another card that doesn't make a pair, then it's the next player's turn.

Whoever gets the "runner" should try to get rid of it as fast as possible by mixing it in the middle of his hand, so that the next player will pick it. In this game, whoever ends up with the "runner" loses.

#### 4. LEARNING WITH HEMOACTION:

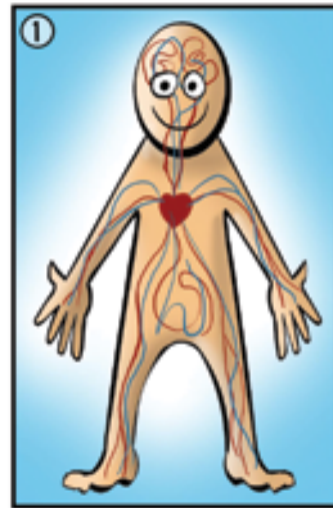
The cards may be used to teach about various topics related to hemophilia:

- The cards are numbered at the top to identify them easily. This manual will help to explain each picture on the cards. After using them for awhile, the child ends up memorizing the meaning of each card. Some TOPICS related to hemophilia that can be taught are:
- types of injuries (cards no. 5, 6 and 7)
- first aid (no. 8)
- the clotting process (cards 5+6+10+11+12+13+19)
- the clotting process in hemophilia (cards 5+6+10+11+12+13+14+15)
- the clotting process with the factor (cards 5+6+10+11+12+13+14+15+16+17+18+19+9)
- characteristics of SLOW clotting in hemophilia (card 15 - the turtle)
- the importance of receiving the factor quickly (turtle speeded up, card 18 + card 17, boy self-infusing the factor, + card 9, the vein healing + card 6, avoiding after-effects to the knee)
- the importance of adult help to strengthen the child's self-confidence and teach him to avoid dangerous situations (cards 24 +25)
- the importance of helping the child when he is afraid to infuse the factor (last card, unnumbered, with a boy running away)

Look at this!

Our body is all linked together  
by internal tubes: they're  
the blood vessels!

These vessels carry blood  
to our entire body and are  
divided into three types:  
arteries, veins and capillaries.





Do you want to see one of these vessels?  
Look carefully at the back of your hand: those are veins!



You can also find other veins in your arms...  
Just open and close your hand a few times so you can see them more easily.





And do you know what runs inside your veins? Blood!

Blood is a red liquid that has a lot of important functions in your body.

One of them is "clotting," which stops the bleeding when we hurt ourselves.

This is an EXTERNAL wound!

That means that the skin opened, the vein was broken and the blood inside of it comes out and we can see it.

Don't worry!  
The first thing to do is tell your parents or another adult nearby.

They'll help you with first aid and decide if you need to take the factor or not.





Here is another kind of wound.  
See the boy's swollen, red knee?

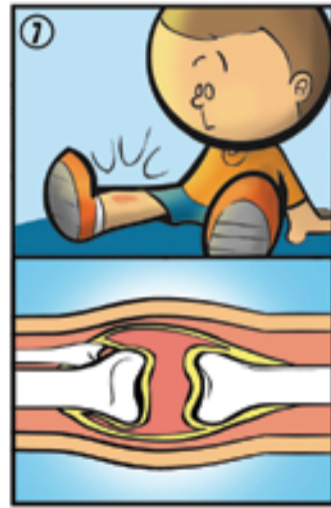
This is INTERNAL bleeding. The skin didn't open and you can't see the blood, but inside the vein is broken and blood is coming out!  
If you take the factor right away, your knee will stop bleeding internally, the pain will go away and you'll get better faster. If not, the accumulated blood could damage the bone and cartilage in your knee.

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Here's a very light wound called an ABRASION.

His knee is just scraped a little, and it didn't bleed or swell up. In this case, you don't have to take the factor, because the little wound will get better by itself.



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## ATTENTION!

For all types of injuries you should always:

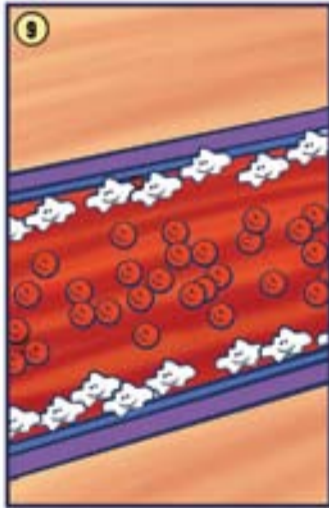
1. WASH the affected area with soap and water.
2. PRESS down on it with a clean cloth or gauze for a few minutes.
3. APPLY ice
4. PUT a bandage on it.

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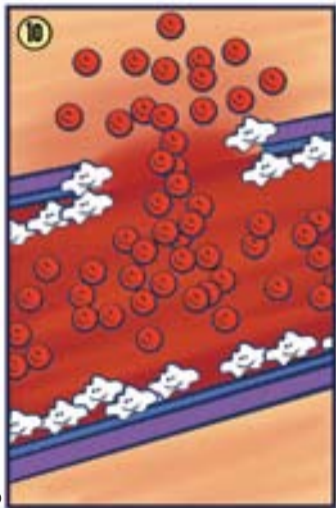
You can see your veins from the outside...

But what are they like inside? Through the skin, veins are like tubes with walls where the blood passes. Blood has various kinds of cells. Here, near the vein wall, are the platelets. More in the middle are the red blood corpuscles, that give the blood their color.



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This is an external wound seen from inside, from the vein's point of view. The vein was broken and the blood is flowing out. This is the way bleeding starts.

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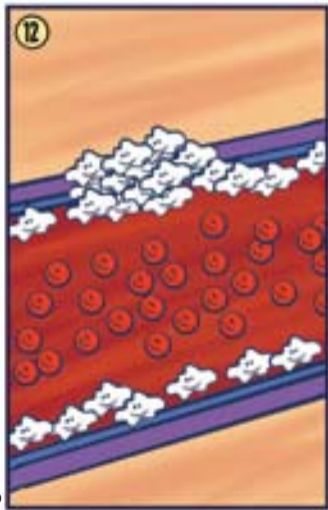
This is vasoconstriction!  
It's the body's first reaction to help stop bleeding.  
The vein contracts where the wound is to stop the blood that is escaping.



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The platelets are the blood cells that help to stop bleeding. They come together quickly where the vein is broken to "plug" the hole and not let the blood get out. The name of this "plug" is the platelet plug, a reaction of the body that stops minor bleeding, such as the scraped knee. This reaction happens normally in people who have hemophilia, because they have the right amount of platelets.

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You still don't understand how the platelet plug works?

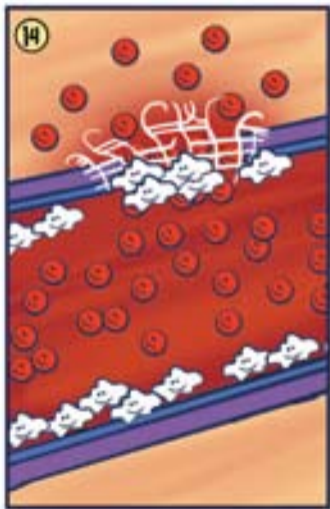
It's just like a sink stopper!

It works the same way: it doesn't let any more blood get out so that clotting can begin.



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If the injury is bigger, the bleeding won't stop with just the platelet plug. On top of the plug, a "net" will be made (the fibrin net) that will keep the blood in place so that the vein can mend. This is the clotting process! With people who have hemophilia, this net takes a long time to be made - and when it is formed, the clotting is neither firm nor strong. It's like in the picture: the formation of the net is weak and takes a long time, so the blood doesn't stop going out! This happens because one of the various factors needed to form the fibrin net is missing.



Look at the hard-working turtle!  
But even so, he's very slow...

He's like the formation of the fibrin net in A and B hemophiliacs.

But the blood can't wait so long to clot!  
It's bad for joints and other parts of  
the body that can bleed.  
We have to do something!





The solution is the FACTOR. Anybody who has hemophilia A should take factor 8. And those who have hemophilia B should take factor 9. One of the vials has the factor concentrated into powder and the other has sterile water. We have to mix them together to make a solution that can be injected into the vein. Look, how cool!



This boy doesn't need help any more to apply the factor! He already knows how to self-infuse because he learned how to do it just right at the hemophilia center. He also knows how important it is to apply the factor as soon as he hurts himself, because it will help his blood to clot more quickly and avoid damage to his joints.



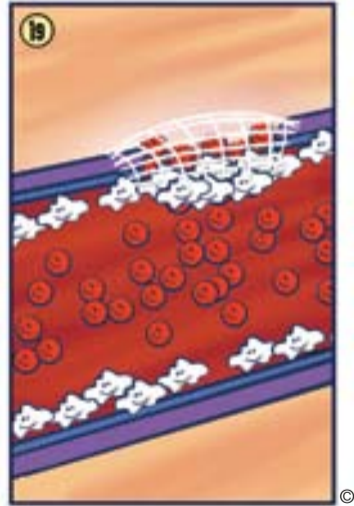


Aha!!! Look at the turtle now!! The factor made him all super-charged and fast! Just like the clotting! Now the bleeding will stop at the right time.

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Look at what happens to the net after taking the factor:  
It's well made, the blood has stopped coming out and the vein walls are mended!  
Now you have to rest for a few days to recover completely, and then start your physiotherapy sessions!  
The physiotherapy will help you get your movement back and strengthen your body more quickly!



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To get better after bleeding, you shouldn't run around too much. You should take a break and let your body recuperate. The best thing to do is to draw pictures, paint, or play with interactive toys - it's a good time to be creative!



It's great to learn how to swim! Swimming strengthens your muscles and helps protect your body's joints. Swimming, diving and playing in the water are activities that make any kid happy! But you also have to pay attention to a few rules. Good tips are: looking to see if the floor around the pool is slippery and removing any objects that might hurt you.





Playing ball? Usually, soccer matches or other contact sports aren't recommended because there's a good chance of falling, bumping into others, and getting hurt! However, this could change if you're on a prophylaxis program authorized by your hemophilia service and monitored by a specialized professional. But remember: to play ball, you should always wear sneakers and play on a smooth surface (like grass or sand).



Moving your body and dancing are other good activities to strengthen your muscles and stay flexible! Besides that, it's lots of fun. And even more fun when the music is good!





Parents and teachers should help you get to know the world around you. To understand what's dangerous, you need explanations. Holding your hand, they'll show you the best way to step on the ground and to climb stairs and get onto chairs, beds and sofas. This way, you'll be more confident and know how to be careful all by yourself!

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Exploring your own world is very important for your development. It gives you more confidence in your movements, helps you discover your own balance better and you'll be able to walk around more safely and freely.

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Did you know that hemophilia exists in all the countries in the world and sometimes even girls have it? A and B hemophilia means that the person's clotting doesn't work the way it should. It takes longer for bleeding to stop and this is why he has to put back the factor that's missing. Also, bleeding for a long time can be dangerous to your health. This is why it's very important to tell your parents right away whenever you hurt yourself so you can begin treatment as quickly as possible!



Wow!  
See the boy who doesn't want to take the factor?  
This is the RUNNER! We have to stay away from him!  
Don't be afraid to take the factor!  
It's very important to stop bleeding quickly.  
At the hemophilia center, the people who apply the factor have a lot of experience and will always treat you well.  
And pretty soon you'll be able to learn how to apply it yourself.  
Won't that be cool?





