

A

WEDNESDAY 6 JULY 20:00
OLD TRAFFORD, MANCHESTER

 ENGLAND
 AUSTRIA

THURSDAY 7 JULY 20:00
SOUTHAMPTON

 NORWAY
 NORTHERN IRELAND

MONDAY 11 JULY, 17:00
SOUTHAMPTON

 AUSTRIA
 NORTHERN IRELAND

MONDAY 11 JULY, 20:00
BRIGHTON & HOVE

 ENGLAND
 NORWAY

FRIDAY 15 JULY, 20:00
SOUTHAMPTON

 NORTHERN IRELAND
 ENGLAND

FRIDAY 15 JULY, 20:00
BRIGHTON & HOVE

 AUSTRIA
 NORWAY

B

FRIDAY 8 JULY, 17:00,
MILTON KEYNES

 SPAIN
 FINLAND

FRIDAY 8 JULY, 21:00,
BRENTFORD

 GERMANY
 DENMARK

TUESDAY 12 JULY, 17:00
MILTON KEYNES

 DENMARK
 FINLAND

TUESDAY 12 JULY, 20:00
BRENTFORD

 GERMANY
 SPAIN

SATURDAY 16 JULY, 20:00
MILTON KEYNES

 FINLAND
 GERMANY

SATURDAY 16 JULY, 20:00
BRENTFORD

 DENMARK
 SPAIN

C

SATURDAY 9 JULY, 17:00
WIGAN & LEIGH

 PORTUGAL
 SWITZERLAND

SATURDAY 9 JULY, 20:00
SHEFFIELD

 NETHERLANDS
 SWEDEN

WEDNESDAY 13 JULY, 17:00
SHEFFIELD

 SWEDEN
 SWITZERLAND

WEDNESDAY 13 JULY, 20:00
WIGAN & LEIGH

 NETHERLANDS
 PORTUGAL

SUNDAY 17 JULY, 17:00
SHEFFIELD

 SWITZERLAND
 NETHERLANDS

SUNDAY 17 JULY, 17:00
WIGAN & LEIGH

 SWEDEN
 PORTUGAL

D

SUNDAY 10 JULY, 17:00
MANCHESTER

 BELGIUM
 ICELAND

SUNDAY 10 JULY, 20:00
ROTHERHAM

 FRANCE
 ITALY

THURSDAY 14 JULY, 17:00
MANCHESTER

 ITALY
 ICELAND

THURSDAY 14 JULY, 17:00
ROTHERHAM

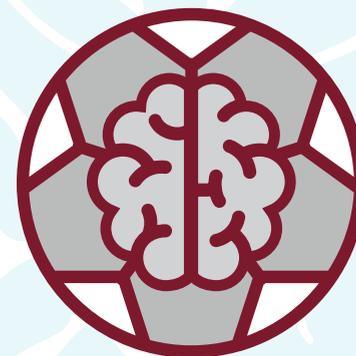
 FRANCE
 BELGIUM

THURSDAY 14 JULY, 17:00
ROTHERHAM

 ICELAND
 FRANCE

THURSDAY 14 JULY, 17:00
MANCHESTER

 ITALY
 BELGIUM



FOOTBALL

ON THE BRAIN

DID YOU KNOW YOUR BRAIN IS FUNDAMENTAL TO ALL YOUR FOOTBALLING ACTIVITIES?

I CONTROL YOUR MUSCLES, HELPING YOU PUSH YOUR BODY TO THE LIMITS...

I DRIVE THE EMOTIONS YOU EXPERIENCE BEFORE, DURING AND AFTER A PENALTY

I HELP YOU LEARN NEW SKILLS

I PREDICT WHERE THE BALL WILL GO

I MOTIVATE YOU IN TRAINING DRILLS



YOUR BRAIN ON FOOTBALL

Playing football takes skill, practice, and a lot of brain power. You need to (1) be aware of where people are on the pitch and predict where the ball and the players will be, (2) make quick decisions, (3) make a pass and (4) learn from your experience.

Here are some of the things your brain needs to work out just to make a pass:



1. WHERE AM I? WHERE IS THE BALL? IS THERE SOMEONE TO PASS TO? WHERE WILL THEY BE WHEN I PASS?

2. WHERE DO I WANT THE BALL TO GO? WHICH FOOT SHOULD I USE? HOW HARD SHOULD I KICK THE BALL?

3. WHICH MUSCLES DO I NEED TO MOVE? WHEN DO I MOVE THEM TO HIT THE TARGET?

NATALIE MINCHER/SPP

Aston Villa's Maz Pacheco in action

PRACTICE MAKES PERFECT



Did you make the pass? If so, your brain will strengthen connections to make it more likely to do the same again.

Did you miss? In this case your brain will make sure you try something different next time.

Just like your muscles, your brain changes and improves activity with training. But mistakes are also important, as your brain can learn from them.



PETER SONANDER/SPP

Felicia Saving and Mia Jalkerud of Eskilstuna United celebrate their goal while Piteå's dejected players look on, during the Swedish Cup game at Tunavallen in Eskilstuna, Sweden, February 2022

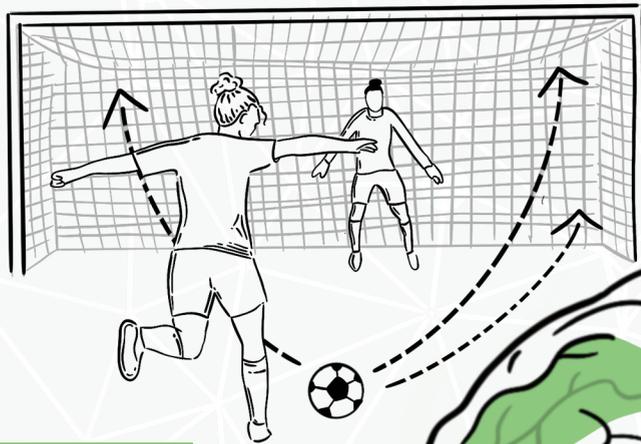
THE EMOTIONAL HIGHS AND LOWS OF FOOTBALL

The emotional side of football also relies on the brain - whether your head is in your hands after a missed penalty, or you're enjoying a goal celebration after hitting the back of the net - the emotional centres deep in your brain can use this information to help improve your football skills.

As these examples demonstrate, football requires a large amount of brain power, making it a truly remarkable experience to play and to watch.



Did you know that different parts of your brain have different jobs? Your brain includes areas that are specialised for vision, movement, speech, learning, emotion and prediction, to name a few. All of these different brain areas get busy every time you play football!



**MOVE YOUR
BODY TO PASS,
DRIBBLE &
SHOOT**

**SEE WHAT
HAPPENS ON
THE PITCH**

**PREDICT WHAT
IS GOING TO
HAPPEN NEXT**



**COMMUNICATE
WITH YOUR
TEAMMATES**

**MOTIVATE
THROUGH
SUCCESS**

**OPTIMISE
YOUR SKILLS
THROUGH
PRACTICE**



BRAIN TEASERS

THE PREDICTIVE BRAIN

To make a perfect pass your brain needs to make predictions - where will the ball travel? Where will your teammate be in a few moments? To figure that out involves taking in lots of visual information and doing some complex maths. Thankfully, the prefrontal cortex, at the front of your brain, does all this without you even being aware of it.



SPOT THE BALL

CAN YOU GUESS WHERE THE BALL IS IN THESE PICS?



To do this, your brain uses visual information about body shape and where the eyes are pointing to make a guess. We use similar information when we're playing.

THE EMOTIONAL BRAIN

Whether you're playing or spectating, football is an emotional rollercoaster. The amygdala, buried deep within the brain, helps to regulate our emotional responses.

Here are pics of emotional footballing moments. Can you guess what caused each of these emotional responses?



WORD SEARCH

Find the brain/football words in the grid. Can you tell which words are brain-y and which are football-y?

- AMYGDALA
- CORTEX
- PENALTY
- BRAIN
- DEFENDER
- POACHER
- CORNER
- EMOTIONS
- PREFRONTAL



C	Y	U	S	N	Q	C	A	L	D	U	E	U	K	F
A	S	T	Y	S	O	G	S	A	E	T	S	F	L	H
A	L	W	L	R	Y	N	U	T	G	E	Y	H	X	Z
Q	Z	A	N	A	O	H	D	N	R	F	L	V	G	U
E	C	E	D	I	N	M	V	O	R	F	E	T	O	B
B	R	K	T	G	K	E	O	R	O	O	U	O	Y	E
G	I	O	V	X	Y	I	P	F	B	R	A	I	N	P
D	M	R	H	Z	N	M	O	E	U	Z	I	X	L	K
E	E	D	T	U	G	P	A	R	N	Z	M	V	J	T
L	Y	F	K	A	T	O	H	P	I	W	Z	R	J	T
J	D	P	E	L	U	A	L	B	B	Q	R	M	B	S
T	J	D	V	N	J	C	F	Z	Z	H	Z	H	O	B
T	V	L	X	W	D	H	M	L	Q	F	P	W	X	W
M	W	H	P	T	C	E	C	X	M	I	U	W	X	S
S	P	E	K	Q	W	R	R	X	E	T	R	O	C	I

Answers: A: England's Rachel Daley and Millie Bright celebrate after their Arnold Clark Cup tournament victory following their win v Germany at Molnux Stadium, Wolverhampton in Feb 2022. (Daniela Forcellì/SP) B: Lyon's Head coach Sonia Bompastor is angry on the sidelines during their D1 Arkema match against Paris FC at Groupama Stadium in Lyon, France. (Lyudmila Domozetskii/SP) C: Spain's Lucia Garcia looks dejected after missing a clear chance during the Arnold Clark Cup football match v England at Carrow Road, Norwich, in Feb 2022. (Daniela Forcellì/SP) SPOT THE BALL: 1-D4 & 2-B3

THE LEARNING BRAIN

Every time you practise a skill, that training changes your brain. You strengthen brain connections and lay down pathways in the brain that make you a better footballer.

Try practising keepy-ups every day during Euro 22. Keep track of how many you can do in our handy planner.



06/07	07/07	08/07
09/07	10/07	11/07
12/07	13/07	14/07
15/07	16/07	17/07
18/07	19/07	20/07
21/07	22/07	23/07
24/07	25/07	26/07
27/07	28/07	29/07
30/07	FINALS DAY 31/07	



Football on the Brain is a four-year public engagement project involving researchers and football communities understanding more about how our brains are involved in football. Follow along on Twitter: @FootballOnBrain #FootballOnTheBrain

QUARTER FINAL 1

WEDNESDAY 20 JULY, 20:00
BRIGHTON & HOVE

W

WINNERS GROUP A

RU

RUNNERS-UP GROUP B

QUARTER FINAL 2

THURSDAY 21 JULY, 20:00
BRENTFORD

W

WINNERS GROUP B

RU

RUNNERS-UP GROUP A

QUARTER FINAL 3

FRIDAY 22 JULY, 20:00
WIGAN & LEIGH

W

WINNERS GROUP C

RU

RUNNERS-UP GROUP D

QUARTER FINAL 4

SATURDAY 23 JULY, 20:00
ROTHERHAM

W

WINNERS GROUP D

RU

RUNNERS-UP GROUP C

SEMI FINAL 1

TUESDAY 26 JULY, 20:00
SHEFFIELD

W

WINNERS QF1

W

WINNERS QF3

FINAL

SUNDAY 31 JULY, 17:00
WEMBLEY

W

WINNERS SF1

W

WINNERS SF2

SEMI FINAL 2

WEDNESDAY 27 JULY, 20:00
MILTON KEYNES

W

WINNERS QF2

W

WINNERS QF4

All kick-off times are BST (UK time/UTC+1).

All England and Northern Ireland games will be shown LIVE on BBC One.

Fill in the scores and track your team to the final!

