

# Which music stimulates your baby?

- Institut Marquès will present today at the World Congress "Ultrasound in Obstetrics and Gynaecology (ISUOG)" in Berlin its study on the reactions of foetuses to different types of music
- Same as newborns, foetus like classic and traditional music, which has been transmitted through the generations.
- Among the foetus's favourite musical themes, you can find "A Little night music" by Mozart, Christmas carols and "Bohemian Rhapsody" by Queen.
- The study compared the reactions of foetuses while listening to music like country music, tribal music, classic themes, pop and rock.
- The centre has just started another study that analyses the reactions of foetuses to football anthems

#### Barcelona, 14th of October 2019

Neither pop nor rock. Fetuses, the same as newborn babies, prefer classic music to traditional music. This has been shown by the study done by the international clinic for assisted reproduction <u>Institut Marquès</u>. This study will be presented today at the 29th edition of the Berlin World Congress "Ultrasound in Obstetrics and Gynaecology (ISUOG)". It is not known why some music genres have such a positive impact on the development of the foetus inside the mother's womb. But in any case, "it is about the melodies that have persisted through the years", explains Dr. Marisa López-Teijón, director of Institut Marquès, be it a serenade by Mozart or an ancestral drumming session from an African tribe.

According to Dr. López-Teijón, it is precisely this kind of traditional music of simple and repeated sounds that is very much appreciated by newborn children. "Music is a form of ancestral communication between humans, the communication through sounds, gestures and dances preceded the spoken language", explains the director of Institut Marquès. "The first language was more musical than verbal, and it still is; we still tend instinctively to speak in a high pitched voice, because we know that newborn perceive those better, and this way they understand that we want to communicate with them." In addition, they like the fake voice of Mickey Mouse, as you can see in the chart.



# The results of the study

CLASSIC		Mouvement mouth tongue	Protrusion tongue
MOZART	A Little night music	91%	73%
BACH	Solo BWV1030	87%	47%
PROKOFIEV	Peter and the wolf Op.67	88%	10%
STRAUSS	Radetzky March	80%	20%
BEETHOVEN	9th Symphony Ode to Joy	72%	27%
GLOBAL		84%	35%

TRADITIONAL		Mouvement mouth	Protrusion
MADITIONAL		tongue	tongue
SPAIN	Christmas carol	91%	30%
JAPAN	Traditional Kisuna	84%	46%
INDIA	Mantra	82%	9%
AFRICA	African drums	78%	11%
MEXICO	Rancheras	55%	5%
GLOBAL		79%	20%

POP - ROCK		Mouvement mouth	Protrusion
		tongue	tongue
QUEEN	Bohemian Rhapsody	90%	40%
VILLAGE PEOPLE	Y.M.C.A	90%	10%
ADELE	Someone like you	60%	20%
BEE GEES	Too much heaven	59%	0%
SHAKIRA	Waka Waka	50%	8%
GLOBAL		59%	15%

VOICES	Mouvement mouth tongue	Protrusion tongue
MICKEY MOUSE	76%	17%
HUMAN	60%	0%

# Listen to the different music genres

Although pop-rock is a music genre that provokes less reaction in the foetus, there are some exceptions to the rule, as it is the case of *Bohemian Rhapsody* de Queen, or the instrumental *Mna Na h'Eireann*, performed by Sharon Corr (of the Irish quartet The Corrs). "Maybe those actual songs that have so much success now with the foetal development will, thorough the years, become musical evergreens", adds Dr. Álex Garcia-Faura, Scientific Director of Institut Marquès.



In order to conduct the study Fetal facial expression in response to intra-vaginal emission of different types of music, the researchers at Institut Marquès have studied the movements of mouth and tongue of 300 fetuses between 18 and 38 weeks of gestation exposed to 15 different songs of three different music genres: classic (Mozart, Beethoven...), traditional (Christmas carol, African drums...) pop-rock (Shakira, Queen...). To this effect, a vaginal speaker was developed by the team of Institut Marquès: "Thanks to <u>Babypod</u> we have demonstrated that foetuses can hear starting from week 16 when they measure only 11 centimeters, if the sound directly comes from the vagina", explains Dr. López-Teijón. "Foetuses can barely perceive external sounds".

#### Classic and traditional music stimulates the fetuses

The music genre causing a higher percentage of fetuses moving their mouth was classic music (84%), followed by traditional music (79%), and last but not least pop rock music (59%). Once the foetuses are able to stuck out their tongue (protrusion), classic music is again their favorite music genre with the highest percentage (35%), followed by traditional music (20%) and pop-rock (15%).

It is very unusual that those movements are spontaneously produced during the second and third trimester of the pregnancy (only 3 to 5% do it without a specific stimulus). Therefore, the study lead by Institut Marquès demonstrates the importance of the early neurological stimulation, which can activate brain areas related to language and communication. And this particular stimulation can only be achieved through intravaginal route.

Coinciding with the beginning of the football season, Institut Marquès has just started at its clinic in Barcelona, Spain, a study to analyse the reaction that foetuses have when they listen to the anthems of their parents' favourite team. The first results of the study can be surprising.

### Music at the beginning of life

Institut Marquès, whose headquarters are based in Barcelona, has carried through years ago a groundbreaking research about the effects of music on the beginning of life. The Institut Marquès's studies about music during the embryonic and foetal development have received many internationals rewards, among those was for instance the Ig Nobel of Medicine in Obstetrics received at Harvard University by Dr. López-Teijón. The objective of the Ig Nobel is for prestigious scientists from all over the world to present their research to the public in a fun and entertaining way.

As the main investigator of that study, Dr. López-Teijón explains that "with our scientific research we have improved the fertilization through musical vibrations in the incubators of our fertility clinic". To this effect, Institut Marquès has also organized various concerts, for example with artists such as <a href="Antonio Orozco">Antonio Orozco</a>, or more recently with <a href="Álex Ubago and Sharon Corr">Álex Ubago and Sharon Corr</a>, who came to the clinic in April 2018 in order to sing in front of the embryos that were evolving in the incubators.



#### **About Institut Marquès**

Institut Marquès is a Barcelona based centre of international standing in Gynaecology, Obstetrics and Assisted Reproduction with branches in Barcelona, London, Ireland (Dublin and Clane), Italy (Rome and Milan) and Kuwait.

The centre, with a wealth of experience in particularly difficult cases, helps people in more than 50 countries achieve their dream of parenthood. Institut Marquès offers the highest pregnancy success rates, with 89% per cycle in IVF with egg donation.

Leader in innovation, it conducts an important line of research on the benefits of music in the early stages of life, foetal stimulation and the male role in assisted reproduction treatments.

Institut Marquès is also involved in the research of the relationship between chemical toxins and fertility, taking part in many initiatives that support the defense of the environment. In 2018 it started its Corporate Social Responsibility project, "The Forest of Embryos". For every child born with the help of assisted reproduction treatments, a tree is planted. Institut Marquès also supports the manifesto "Citizens for Science in Pesticide Regulation", a coalition of civil society, institutions, scientists and legal experts that demands a reform on the use of pesticides in the European Union.

#### **Useful links:**

#### Music and fertilisation:

<u>Fertility experiences – Music enhances In Vitro Fertilisation</u>
<u>IVF to the Beat of the Music. We Have Made our Embryos Dance</u>
Madres futboleras

#### Music and foetal stimulation:

The story of a discovery (1)

The Story of a Discovery (2) - The first tests continue

The Story of a Discovery (3) – The scientific research starts

The Story of a Discovery (4) The results of the first study

The Story of a Discovery (5) – What do we think can be heard inside the uterus?

## Scientific studies:

Discovery in the area of fetal stimulation through intravaginal music

Discover the fetuses' reaction whith some musics

Fetal facial expression in response to intravaginal music emission

#### Conciertos para embriones y para fetos:

Sharon Corr & Álex Ubago's concert at Institut Marquès

Christmas Concert by Soraya for future babies through Babypod®

Soraya Arnelas communicates with her baby through Babypod

Concert for embryos of Antonio Orozco

#### Babypod:

https://babypod.net/en/