

This response was submitted to the consultation held by the Nuffield Council on Bioethics on Give and take? Human bodies in medicine and research between April 2010 and July 2010. The views expressed are solely those of the respondent(s) and not those of the Council.

University of Leicester Medical School - group 8

Response to Nuffield Bioethics National Consultation

Group 8

Q1: Are there any additional types of human bodily material that could raise ethical concerns?

Human bodily materials that are also used and have some ethical concern are materials such as hair follicles, finger nails and the most interesting brain tissue.

The brain is a unique organ to the individual, like many of its organs, except it is an organ which holds a personality and memories to a specific individual. In my research I found that brain transplantation in mice had occurred and successfully worked, however this occurred in New York in 1982 and there has been no additional reasoning to it occurring in the human cases. The procedure is one where the brain is moved from one being into the body of another, the scientist involved expressed his thoughts that it could be an operation that could save a dying individual with a brain-based illness from death. However bioethics saw this as morally wrong. They stated that "it is morally wrong to harvest a brain dead body, especially if human cloning has occurred". This transfer of a brain for a healthy body is seen as "swapping lives" and hence the procedure has never occurred in the human individuals. On the other hand in a less extreme manner, there is the opinion that it is saving a life instead of losing two, therefore giving people the chance to live a better quality of life with a new body and normally functioning systems.

Hair follicles were an additional item that was brought to attention by the group and the possibilities that it is of ethical concern. However, in researching we found that there are a lot of medical institutes, in America especially that specialize in hair follicle growth and replanting into the scalp of the head. However due to biological reasons the hair follicle grown can only be implanted back into the same individual it came from. We found that this caused no ethical problems. Similarly in finger nails, we found no evidence that any form of this bodily material is used in transplants.

Out of interest, we found an article (<http://www.scu.edu/ethics/publications/ie/v1n2/kidneys.html>) which states that selling of bodily material such as kidney is saving lives for people on waiting lists and reducing cost of expensive dialysis in this case and other opinions state that individuals would profit and take advantage of individuals in these needing situations making it morally wrong.

Overall there are many issues with bodily material being used for donation. This is only going to be regulated by the law and how they conclude the public's overall view and situations on donation of bodily material.

Q2. Should any particular type(s) of human bodily material be singled out as 'special' in some way?

Before answering this question, the term bodily material must be defined. It is defined as; all forms of human biological material that can be donated for use in medicine and research, from individual cells to solid organs. (1)

With this in mind, some bodily material can be possibly seen as 'special' in some way – permission is required to acquire and use it, which means it has an inherent value.

Almost all bodily material is important for the normal functioning of the body. This means that removal of certain bodily material from a living person can have an effect on the individual and their quality. This can also include psychological impacts on the individual, especially regarding gross donation (whole organs etc)

One angle to consider is that 'rare' bodily material is special due to the limited amount available. According to the transplant activity from the NHS blood and transplant, there was a low number of hearts donated from deceased patients compared to other organs (2). If we take the standard model of supply-and-demand, rarer material will have a greater inherent value, simply because of the 'respect' it can demand.

Connected to this, material that has a relationship in the public's opinion to life and the 'soul' hold value, specifically brain material and whole organs. Donating such material may be considered to be more special than 'inert' connective tissue simply because it has such strong connections with the natural human instinct to be fascinated by life forces.

Body material that is, or (falsely) considered, part of identity could be considered special. This includes face, finger prints and corneas. These are generally accepted as material that normally people don't donate due to the fact that identity belongs to one person only. It is a unique aspect of someone's life that people might not feel comfortable with giving up, even after death. 'Face transplants' are a very modern advancement, and still command media attention, which may indicate the special nature of the face.

To answer if bodily material should be considered special in some way, we say that it all depends on the individual and what they treasure the most. People are different; they hold different values which means that no one type of bodily material can be enforced as special when other people do not really regard it. However, it is generally regarded that all body material has some value that requires protection and regulation. Equally, material that relates to 'identity', 'soul' and 'life' (face, brain material, heart and other whole organs) will hold value to many people, even if it does not appear rational to scientific community.

References

https://consultation.nuffieldbioethics.org/go/SiteSections/Section/Page_219.html#bodily_material

http://www.organdonation.nhs.uk/ukt/statistics/transplant_activity_report/current_activity_reports/ukt/2008_09/transplant_activity_uk_2008-09.pdf

Page 9 Table 2.1

Q3. Are there significant differences between providing human bodily material during life and after death?

This question is very broad in scope, as it includes everything from blood to heart donation and does not necessarily only consider donating to other patients but may include other types of donation such as to scientific research.

One argument that there is a significant difference is based upon consequentialism in terms of the donor. Whilst alive, there are often significant risk factors for the donor particularly with donations involving surgery such as organ donation. For example, with live kidney donation there is a 1 in 2500 risk of death of the donor.¹ In contrast, there are no such risks after death and makes this a strong point to consider.

¹ Statistic from the NHSBT (NHS Blood and Transplant) website

Q4: What do you consider the costs, risks or benefits (to the individual concerned, their relatives or others close to them) of providing bodily material? Please distinguish between different kinds of bodily material if appropriate

1. Blood transfusion:

Costs:

Individuals donating blood should not financially gain from the process. The WHO suggests that blood donation should be done so voluntarily. Nobody should be forced to donate, for example for family as the trade of human blood and body parts is unethical. "The dignity and worth of the human being should be respected." *Macpherson CR, Domen RE, Perlin T, editors. Ethical issues in transfusion medicine. Bethesda: American Association of Blood Banks Press; 2000.*

<http://www.issuesinmedicalethics.org/1430a87.html>

Ethical issues in transfusion medicine

Priti Elhence¹

Risks:

If blood of individual donating is infected then recipient will become infected too. This risk is reduced by asking individuals donating questions about their medical history, lifestyle and testing the blood. However, it is the responsibility of the individual donating to tell the truth when providing information on their medical history and lifestyle.

<http://www.issuesinmedicalethics.org/143oa87.html>

Ethical issues in transfusion medicine

Priti Elhence¹

If the donated blood is not typed correctly, then the transfused blood cells may be abruptly destroyed which can lead to kidney damage and illness in the recipient

http://www.personalmd.com/news/transfusion_10022000.shtml

Benefits:

Used to replace blood that has been lost, for example in individuals with anaphylactic shock

Used to provide blood components that the body cannot synthesise for itself or synthesises at a reduced rate, for example in haemophilia and thrombocytopenia

<http://www.webmd.com/a-to-z-guides/blood-transfusion-uses-of-blood-transfusion>

2. Whole organs:

Costs:

Individuals who donate organs should not receive payment for doing so

Organ trafficking is illegal in all Countries apart from Iran

<http://www.who.int/bulletin/volumes/82/9/feature0904/en/index.html>

Risks:

To patient receiving organ:

They will have to take immunosuppressant drugs to prevent their body from rejecting the organ which will mean they are more prone to infection. Also, the drugs may have harmful side effects

<http://www.nhs.uk/Conditions/Organ-donation/Pages/Risks.aspx>

There is a risk of the recipient's body rejecting the organ and of them acquiring an infection

Organ donation from a living donor:

There are potential long term complications associated with all living donation procedures, for example with kidney transplant the donor has an increased risk of developing high blood pressure and kidney failure

http://www.ehow.com/about_5447941_organ-donation-risk.html

Benefits:

Increase the quality of life of the recipient of the organ

The US Department of Health and Human Services states that for every one organ or tissue donor, over 50 lives can be saved or improved

Affects the lives of recipients family

<http://patient-health-education.suite101.com/article.cfm/benefits-of-organ-donation>

3. Sperm and Eggs, for use in infertility treatment:

Costs:

High cost treatments are not available to all

The money that the NHS contributes towards infertility treatment could be used to in other divisions of the NHS

Risks:

Egg donors must take fertility drugs, which could lead to (ovarian) hyperstimulation syndrome, and can require hospitalisation. Moreover, the process of egg retrieval could lead to bleeding and infection, even though this is very rare. Both of these conditions, however, can potentially lead to infertility

<http://www.ivf1.com/egg-donor-risk/>

Not many risks involved in sperm donation per se, but there are I suppose there might be ethical issues/risks arising. Sperm donation and banks are generally targeted to single mothers/lesbian couples; their children might then wonder who their father actually is etc. Then again, this is quite subjective and very open to debate.

Benefits: Gives people who cannot naturally conceive the opportunity to have children.

Egg donation might help women who have a uterus but cannot produce eggs as a result of damage to ovaries, inherited disorders (such as Turner's) and treatment/medication (e.g.: chemotherapy). Also, sperm and egg donation can help couples who have a high risk of passing on a genetic disorder to their offspring: enables them to conceive without having the risk of passing on the trait (e.g.: Haemophilia...other x-linked conditions.)

http://aquarius.futurewebspaces.co.uk/ngdt.co.uk/index.php?option=com_content&view=article&id=66:becoming-an-egg-donor&catid=1:becoming-a-donor&Itemid=14

4. Embryos, for use in infertility treatment, for example where neither partner can produce viable gametes, or research

Costs:

Very expensive. Generally in-vitro fertilisation is a couple's last resort to try and conceive, as it is very costly compare to other methods,

Risks:

Multiple births, ovarian hyperstimulation syndrome and post-natal depression, but that varies quite a bit.

Again, you can try and consider the 'ethical risks' of IVF...Roman Catholic Church doesn't approve as it is unnatural → 'test-tube babies'

Also, embryos are selected and implanted, and others are discarded or 'recycled'.

Benefits:

IVF can help both women with problems with their Fallopian tubes or men with low sperm count, or abnormal sperm, or when all other methods of assisted pregnancy fail.

Q5: What do you consider the costs, risks or benefits (to the individual concerned, their relatives, or others close to them) of participating in a first-in-human clinical trial?

There are a number costs, risks and benefits that we would like to consider in relation to participating in a first-in-human clinical trials. First and foremost is the risk of potential harm to health and well-being. Participants in first-in-human trials are usually healthy subjects. Individuals who volunteer for these trials get no therapeutic benefit from the intervention (1) so they should not be put at more than a minimal risk of harm.(2 p.102).

Secondly, costs to the individual may include the time they have to commit to the trial, lifestyle restrictions that may be imposed by participation and the emotional strain of the concern for potential harm. All of these costs can be extended to the individual's relatives and those close to them. For example, time committed to participation in the trial is time that is being taken away from family and loved ones. Lifestyle restrictions can have an impact on a whole family unit such as dietary restrictions and meal times. Additionally, concerns regarding the potential for harm from participation may affect interactions between individuals and their loved ones, putting a strain on relationships.

Conversely, there are some benefits to be gained from participating in clinical trials. Individuals may gain a sense of altruism through benefiting others although this can be questioned by the idea that altruism no longer exists in the commercial world of modern health care (3). This could be supported by the fact that participants are remunerated for the length of time of residence, number and length of benefits and lifestyle restrictions as well as the type and extent of inconvenience and discomfort (1). This could be viewed as a financial benefit because the participant may view the trial as a method of earning money,. There are concerns however, that this will bring about commodification of the body (4). Participants may also gain a benefit from the additional access to medical care and assessment that comes from participating in a trial. For example, cervical cancer was identified in some participants of the HPV vaccine trial earlier than it would have been by standard screening allowing them to benefit from earlier identification and treatment.

In summary it is evident that there are both risks and benefits to participating in clinical trials and these can only be evaluated in relation to the individual participants.

References

1) abpi (2007) Guidelines for Clinical Trials London: abpi

2) Hope, T (2004) Medical Ethics: a very short introduction New York: Oxford University Press

3) Busby, H (2006) Biobanks, bioethics and concepts of donated blood in the UK. *Sociology of Health and Illness* Vol.28 No.6 pp. 850-865

Furthermore, donation whilst alive can affect the quality of life of the donor even without complications from the surgery. If a kidney was donated and, later in life, the donor suffered significant damage to their remaining kidney, they will not have the other kidney to support it and their quality of life will be affected by the decision to donate that they made much earlier.

Also, there could be a significant difference based on practicality. In life, the donor is the one who must consent to making the donation. However after death, it is the family's consent that must be sought and this may go against the potential donor's original wishes. This highlights a difference in the role of the donor and their family between life and death.

For many, it would be important to make a distinction between the types of donation being considered. For example, most would agree that organ donation to scientific research should not occur before death because there is no specific life being saved and the risk to the donor would be unnecessarily great. This shows how different circumstances also affect the provision of bodily materials at different stages.

Another practical point is that some bodily material can only be donated after death of the donor, for example hearts. This means there is a significant difference between donation whilst alive and after death because life restricts the types of donation possible.

An argument against a difference is that of consequentialism for the patient receiving treatment. Whether the material is donated by a live or dead donor, the patient's quality of life will be improved regardless. Some would argue that this is the most important point to consider because it is their health that is endangered by a lack of treatment.

Also, the reasons that the donor considers donation are likely to be the same regardless of when they donate. For example, if they donate because they wish to be altruistic, this is the same whether alive or dead. This point is weakened by the reasoning that although a donor may wish to save another's life, they probably do not want to do this at a significant risk to their own.

Overall, I think I have shown there are sufficient reasons for considering the provision of bodily material as significantly different between life and after death. I feel the most important reason for this is the risk to the quality of life and possible consequences to the donor when alive, as well as the practical considerations.