

Body fat removal: A case report

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Introduction

Our understanding of the body fat accumulation. The bulk of dietary lipids is neutral fat or triglycerides composed of a glycerol backbone with each carbon linked to a fatty acid. Foodstuffs typically also contain phospholipids, sterols like cholesterol and many minor lipids, including fat-soluble vitamins. Finally, small intestinal contents contain lipids from sloughed epithelial cells and considerable cholesterol delivered in bile. In order for the triglyceride to be absorbed, two processes must occur: 1) large aggregates of dietary triglyceride, which are virtually insoluble in an aqueous environment, must be broken down physically and held in suspension - a process called emulsification, and 2) triglyceride molecules must be enzymatically digested to yield monoglyceride and fatty acids, both of which can efficiently diffuse or be transported into the enterocytes. The key players in these two transformations are bile acids and pancreatic lipase, which are mixed with semi-fluid mass of partially digested food that is expelled by the stomach into duodenum through pyloric valve and gets absorbed to the lymphatic fluid and then from the lymphatic fluid to the blood stream in the small intestine. Bile acids are also necessary to solubilize food lipids, including cholesterol. Bile acids play their first critical role in lipid assimilation by promoting emulsification. As derivatives of cholesterol, bile acids have both hydrophilic and hydrophobic domains. During the exposure to a large aggregate of triglyceride the hydrophobic portions of bile acids intercalate into the lipid with the hydrophilic domains remaining at the surface. Such coating with bile acids aids in breakdown of large aggregates or droplets into smaller and smaller droplets. Hydrolysis of triglyceride into monoglyceride and free fatty acids is accomplished predominantly by pancreatic lipase. The activity of this enzyme is to cut the fatty acid molecules at positions 1 and 3 of the triglyceride, leaving two free fatty acids and a 2-monoglyceride. Lipase is a water-soluble enzyme. The food fat emulsification is a necessary condition of its efficient activity. Shortly after a meal, lipase is present within the small intestine in rather huge quantities, but can act only on the surface of triglyceride droplets. For a given volume of lipid the smaller the droplet size and the greater the surface area, which means more lipase molecules can get to work. Therefore, the fat emulsification is important for the fat ingestion. As monoglycerides and fatty acids are liberated through the action of lipase, they retain their association with bile acids and complex with other lipids to form structures called micelles. As monoglycerides and fatty acids are liberated through the action of lipase, they retain their association with bile acids and complex with other lipids to form structures called micelles. Micelles are essentially small aggregates (4-8 nm in diameter) of mixed lipids and bile acids suspended within the ingested food. As the ingested food is mixed, micelles contact the brush border of small intestinal enterocytes, and the lipids, including monoglyceride and fatty acids, are taken up into the epithelial cells. The major products of lipid digestion are fatty acids and 2-monoglycerides. They enter the enterocytes by simple diffusion across the plasma membrane. A considerable fraction of the fatty acids enter the enterocytes via a specific fatty acid transporter protein in the membrane of enterocytes. Lipids are transported from the enterocytes into blood by a mechanism distinctly different from that typical for the transport of food monosaccharides and amino acids. Once inside the enterocytes fatty acids and monoglyceride

are transported into the endoplasmic reticulum, where they are used to synthesize triglyceride. Beginning in the endoplasmic reticulum and continuing in the complex Golgi, triglycerides are packaged with cholesterol, lipoproteins and other lipids into particles called chylomicrons. This all occurs in the absorptive enterocytes of the small intestine. Chylomicrons are extruded from the Golgi complex into exocytotic vesicles which are transported to the basolateral enterocytes. The vesicles fuse with the plasma membranes and undergo exocytosis dumping the chylomicrons into the space outside the cells. Because chylomicrons are particles, virtually all steps in this pathway can be visualized using an electron microscope, as shown below in Figure 1.

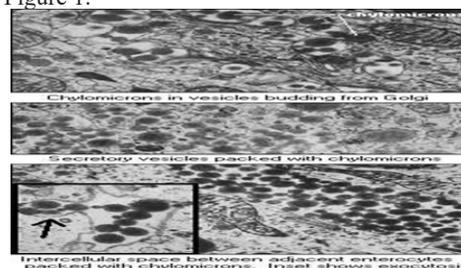


Figure 1 Chylomicrons originated from the food fat.

Due to the food fat, the blood plasma becomes milky due to the presence of billions of light-reflecting chylomicrons (the condition is called lipemia), shown in Figure 2.

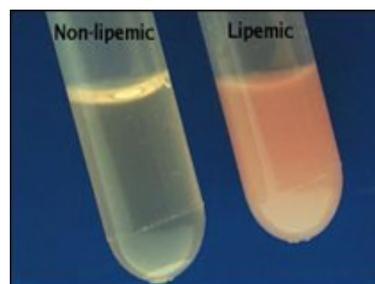


Figure 2 Blood plasma with the chylomicrons from the food fat (on the right).

Therefore, we have decided, that the treatment of our volunteer has to be based on the blood fat removal on a systemic basis during

the certain time to achieve the body fat reduction as that was desired by our volunteer.

The volunteer

An adult individual, the lady in her late 30s working for our businesses as the Chief Accountant, has approached us, when the work has been done, and kindly asked to help her. She maintained diet food intake and regularly exercised. Recently she survived the loss of her very loved mother, the District Judge, and after that she has started to gain her body weight despite of her balanced diet and physical exercise. Due to the body fat accumulation she already had to change several sizes of her everyday clothing. She knew that she was essential for our businesses and could not be replaced. She also knew that we have helped to several our corporate workers in the past and our observations on that have been published.^{1,2} Therefore, she believed that we might help her to decrease the body weight, since the Author, the CEO of said businesses, has the M.D. in Internal Medicine from Saratov State Medical University (the Russian Federation) and that he might use the specific corporate resources to resolve the volunteer's personal problem stated above. She signed all the necessary paperwork as the volunteer and went for the hemodialysis we have established for her to remove the fat from her blood stream on the regular basis. In sixty days, taking said hemodialysis every three days she lost over 200 lbs maintaining her exercises and diet. She became attached to the help of our corporate facility and continued to work efficiently and felt much happier than she was feeling before. Now, we started dealing with the cosmetic issues of our wonderful ladies, who approached us asking for our help with their suddenly developed health problems.

Our motivation

Indeed we have helped earlier to several individuals as described in the peer reviewed journal.^{1,2} The Author of this article, thinking of the essential role of said lady for the corporations, has decided to step in and help her after she has signed all the essential paperwork to become the volunteer. Indeed, in case of the success of the Author's approach the industrial potential for the developed during said volunteering effort would be tremendous paving the road for the new businesses acting beyond of the gasoline and diesel fuel analogs manufacturing. This article is not intended to serve as the advertising material for any purpose, just describes our positive experience in the body weight reduction in the lady-volunteer of the active lifestyle. Hopefully, this article would be the beginning of new commercial processes performed on the individuals with the risk of body weight increase with the subsequent eventual health problems. We must admit herein that we already had several people treated efficiently from their chronic conditions at our corporate facility using the genetically engineered strains we have created for them serving as our volunteers. That made them somehow dependent on the access to our corporate facilities and to the Author of this article, in the best meaning of these words, of course. Said volunteers continued their work for our corporations and worked more efficiently than before our help to them.

This article is not intended to advertise our corporation efforts on the maintaining the proper body weights. This original article is just the description of our personal experience of dealing with the unusual weight increase in our corporate members without their intent and agreement.

Materials and methods

The volunteer

The volunteer went through our regular procedure of filing the corporate paperwork that she would be the volunteer and she was

advised that the treatment we would have propose for her would be the blood cleaning from the food lipids she was getting with her diet foods, performed on her every three days for the time period of 60 days (twenty procedures total). The hemodialysis was performed on said volunteer under the established procedural requirements with the use of our fat-removing adsorbent as we would describe herein. All the components used were thoroughly tested for any microbiological contamination five times before each their use. As you probably know, the emotional state of ladies has much more profound effect on their well being than that happens with men. So, we tried to do our best to help that volunteer lady.

Sorbent used in the blood fat absorption custom-made column

Prepared Polyamide resin containing free amino groups produced from polymeric fatty acid³ was reacted with the stearic acid⁴ (5 lbs \$24). The stearic acid is solid under the body temperature conditions, not soluble in the blood and selectively absorbs from the blood the blood fat coming from the regular food intake. We trust this is one of the efficient solutions to maintain the proper body weight in people who might suffer from body weight fluctuations depending on a number of factors in their lives. We are not going to discuss herein said factors of the body weight fluctuations, but describe the efficient way of blood fat removal which finally resulted in normalizing of the fluctuating body weights. The stearic acid immobilized on polyamide resin with free amino groups was ready after gamma irradiation and respective controls for sterility for the hemodialysis of the patient.

Sterilization of the custom-made blood fat absorbing column:

For the liquid medium sterilization we used the gamma sterilization equipment at our corporate facility. The same gamma irradiation equipment was used to sterilize our custom-made blood fat removal column, which Dr. Tyurin has specifically developed for this particular case of the treatment of the volunteer. Nordion Gamma Irradiator was used to sterilize the custom-made column we have developed for the blood fat removal from the volunteer's blood stream. Said Nordion Gamma Irradiator met the internationally recognized radiation safety and security standards 10 CFR Part 36, IAEA SSG-8 and ANSI 43.10. The sterilization of said column has been achieved per the JS-10000 Nordion Gamma Irradiator⁵ settings: the source of the gamma irradiation from the course of Co-60 with the power 5 MCi, 4 automatic passes through the gamma irradiated area. The gamma irradiated column after the gamma sterilization has passed five independent sterility controls of the column at the Unresco Labs,⁶ 2 hours between each.

Custom-made blood fat absorbing column: This custom-made column has been made of the 3" x 12" plastic cylinder with the connections for the plastic tubes of the blood transfusion system. The custom-made column was filled with the resin (polyamides containing free amino groups) as described in³ reacted prior to the gamma irradiation sterilization with 1.5lbs of the stearic acid.⁷ For the volunteer's blood pumping we used the precision Rongbaipump⁸ set up to pump volunteer's blood 15 ml/min.

The fat removal capacity of this column dropped after the four uses on a single volunteer. The restoration of the fat removal activity of the custom-made column was performed by opening it, replacement of the resin and the stock of the reacted with the resin stearic acid, closing the column like that was before, its gamma sterilization with the mandatory five sterility testings done with the time interval of two hours before each subsequent testing. The refilled column was ready for the reuse.

Customized volunteer's treatment: The amount of the volunteer's blood of approximately one pint (473,18ml) was passed through said custom-made column with the peristaltic pump flow rate of 15ml/min. Said amount volume was indicated to show how much blood was necessary to fill the column. All the volunteer's blood has passed through the blood fat absorption column twice over this procedure. The treatment of the volunteer was performed every three days for the time period of 60 days (twenty procedures total). Before each volunteer's blood treatment the column was washed, dried up and gamma sterilized with the respective sterilization controls as described herein. This time of treatment may vary substantially, but the materials are not included into this article. If you decide to change the suggested scheme of the volunteer's treatment, you have to try to do it yourself.

Results

Results of the volunteer's treatment: Our volunteer meticulously followed all our recommendations. After the 20 blood cleaning procedures described herein she lost 230 lbs and went back to her regular clothing size after said treatment. We spoke to her and she agreed that the treatment has to be repeated every time she feels she is getting weight back. That was another factor binding that Chief Accountant to our corporate structure.

Sterilization of the custom-made blood fat absorbing column: Properly washed and dried in the Purair LF Series, Horizontal Laminar Flow Cabinet ⁴ the blood fat absorption column has been gamma sterilized as described before. The gamma irradiated column after the gamma sterilization has passed five independent sterility control tests of the column at the Unresco Labs ⁶, 2 hours between each.

The cost of the custom-made column for the blood fat absorption refills: If the curious reader remembers who was the volunteer for this experimental project, then there will not be any misunderstanding how the whole process was accomplished. The Author was in the very beneficial state to perform the refills of the blood fat removal column. The Author had his corporate access to the Co-60 sterilization device, the Author could use the corporate accounts for the sending the blood fat removal column for the testing, and the Author did that at his spare time. For the industrial use of the described technology, this is most unlikely that the health insurance company will pay all the costs for said processes. Therefore, the cost burden will be on the volunteer's income only. How specifically that will be performed, the Author cannot speculate right now.

Discussion

The purpose of this original article is to share our customized experience with the fat removal from the volunteer directly at our corporate manufacturing facility. Eventually, this process may be reproduced at the hospital or at the specialized on that the body fat removal cosmetic facility. It is important, that all the sterilization procedures must be conducted as the essential part of the process, so there would not be any contamination danger to the patients. The described process may become very popular because people gain weight constantly and want to get back to the not fat condition of their bodies. We do anticipate the tremendous interest this particular article might generate as soon as it gets to the public attention.

Declarations

Ethical approval and consent to participate: This article does not contain any section, requiring Ethical Approval. The only Author is complied with the Consent to Participate.

Consent to participate: The Author complied with the consent to publish this article.

Consent to publish

This original article has not been published anywhere or is under the consideration to publish anywhere else beside this Journal. The Author complied with the Consent to Publish this original article. Authors Contribution. Dr. Michael V. Tyurin has planned all the experimental work, conducted all the experiments, analyzed the experimental data, wrote this original manuscript, edited or as appropriate and submitted for this publication the edited original manuscript. FUNDING was done by the private investors, who declined to provide their names and their business affiliations. The investors noted, the author should decline any source of funding. Competing Interests. The author declares his personal conflict of interests with the law firm in Houston, TX Hirsch and Westheimer, which has destroyed his corporate website <http://syngasbiofuelsenergy.com>, and with the major petroleum and gasoline/diesel fuel companies in Houston (TX), with the Houston Police (City of Houston) and with the Houston FBI ignoring the Author's concern about his attempted murder committed by SHELL after the Author has presented to SHELL his proprietary technology for gasoline manufacture from the air CO₂, not from petroleum (Tyurin MV, et al. 2019) The attempted murder is of no interest for the corrupt by the major petroleum corporations in Houston, TX Houston FBI. The Author has no intent to file the lawsuit against the Houston FBI at any point, but he is inclined to make this case the public domain. Houston FBI does not follow the established in the USA Federal Laws. Availability of data and materials, All the data and materials are available if necessary from the Author of this manuscript.

Authors' information

The Author is the owner of his mentioned TEXAS businesses Microbial Biocatalyst International, Inc. and Inorgcarb diesel, Inc. The work has been done at the corporate site with the USPS address P. O. Box 300230, Houston, TX 77230.

Acknowledgments

None.

Conflicts of interest

Author declares there is no conflict of interest.

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