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ODESSA NATIONAL MEDICAL UNIVERSITY
DEPARTMENT OF ORTHOPEDIC DENTISTRY

APPROVED
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«31» 08 2023

METHODOLOGICAL DEVELOPMENT TO PRACTICAL LESSONS FROM EDUCATIONAL DISCIPLINE

Faculty **of dentistry**, course **2**

Educational discipline **Functional and aesthetic dentistry**

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Protocol № 11 of "30" june 2023year.
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PRACTICAL LESSON No. 1

Topic: Articulatory balance. Bilateral body structure

Purpose: Acquaint applicants with the concepts of articulatory balance, bilateral body structure, and smile design. Theory of articulation equilibrium (Godon's theory) Theory of relative physiological equilibrium (A. Ya. Katz). Bilateral symmetry. Types of symmetry of different organisms.

Basic concepts:articulation, balance, bilateral, aesthetics, cosmetics.

Equipment: Computer, multimedia projector, phantoms.

Plan:

1. Organizational measures (greetings, verification of those present, announcement of the topic, purpose of the lesson, motivation of higher education seekers to study the topic).

2. Control of the reference level of knowledge:

- Human anatomy.
- Anatomy of the maxillofacial system.
- Anatomy of molar teeth.

3. Formation of professional abilities and skills (mastery of skills, curation, determination of treatment regimen, laboratory research, etc.):

Articulatory balance: This is an important aspect for the proper functioning of our chewing apparatus. Articulation determines how the teeth contact each other during chewing and speaking. Balance in articulation helps to avoid problems with teeth and jaws.

Bilateral body structure: Our body has a symmetrical structure - the left and right parts have similar structures. This also applies to our face and teeth.

The theory of articulatory balance (Godon's theory): According to this theory, balance is achieved through the interaction of different parts of the body, such as muscles, joints, and the vestibular apparatus.The vestibular apparatus plays a key role in the perception of movement and orientation in space.

The theory of relative physiological balance (A. Ya. Katz): This theory indicates that equilibrium depends on the internal state of the organism, its functional capabilities and ability to adapt to changes in the environment.

Bilateral symmetry: Bilateral symmetry means that the body has two identical parts that are located along an axis. This is typical of most animals, including humans.For example, our arms, legs, and sides of our faces have bilateral symmetry.

Types of symmetry of different organisms: In addition to bilateral symmetry, there are other types of symmetry such as radial symmetry (characteristic of some invertebrates) and asymmetry (when an organism has no symmetry at all)

These concepts help us better understand the structure and functioning of organisms, as well as their adaptation to the environment.

These aspects interact with each other, and studying them helps dentists provide our smile with beauty, health and functionality.

3. Summary:

- Articulation balance.
- Bilateral body structure

The theory of articulatory balance (Godon's theory)
The theory of relative physiological balance (A. Ya. Katz)
Bilateral symmetry
Types of symmetry of different organisms

5. List of recommended literature (main, additional, electronic information resources):

Main:

1. Aesthetic accents of dentistry: manual/M.Ya. Nidzelskyi, E.H. Shiyan, H.M. Davydenko. – Vinnytsia: New Book, 2016.-208 p.: illustrations

Additional:

1. Fundamentals of deontology in dentistry. Handbook for students and doctors / Ed. H.P. Ruzyna. –Vynnytsia: New Book, 2008. -120p.

2. Bernard Tuaty, Paul Miara, Dan Nathanson. Aesthetic dentistry and ceramic restorations. Trans. with English.. - M.: IzdatelskyDom "Higher Education and Science", 2004. - 448 p.

3. Crispin B.D., Hewlett E.R., Joe Y.H. Modern aesthetic dentistry. Practical basics. Trans. with English; Ed. T.F. Vinogradova. – Quintessence Publishing House, 2003 – 303 p.

4. Shmidzer Y. Aesthetic dentistry Color atlas .-GalDent, 2005.-312 p., 952 illustrations.

Electronic information resources

1. State Expert Center of the Ministry of Health of Ukrainehttp://www.dec.gov.ua/index.php/ua/

2. National Scientific Medical Library of Ukrainehttp://library.gov.ua/

3. National Library of Ukraine named after V.I. Vernadskyihttp://www.nbuv.gov.ua/

PRACTICAL LESSON No. 2

Topic: Formation and replacement of tooth rows. Functional principles of modeling teeth and dental rows.

Goal: Formation of teeth and dental rows. Anatomy of teeth and dental rows. The shape of the tooth rows. Replacement of tooth row defects. Bite and its types. Features of modeling different groups of teeth with different types of bite

Basic concepts:teeth, dentition, bite, modeling.
Equipment: Computer, multimedia projector, phantoms.

Plan:

1. Organizational measures (greetings, verification of those present, announcement of the topic, purpose of the lesson, motivation of higher education seekers to study the topic).
2. Control of the reference level of knowledge:
- Anatomy of teeth, dental rows.
- Types of bite.

3. Formation of professional abilities and skills (mastery of skills, curation, determination of treatment regimen, laboratory research, etc.):

Formation and replacement of tooth rows: Teeth shape our smile and affect our overall health. Replacing missing teeth can be important to maintain functionality and aesthetics.

Functional principles of modeling teeth and dental rows: When modeling teeth, their functional features, as well as aesthetic aspects, are taken into account. Modeling helps achieve a harmonious look and proper function. Let's look at some key aspects of this process:

The shape of the teeth: When modeling teeth, their shape is taken into account. The teeth should be symmetrical, match the overall face and have a natural appearance.

Teethupperand lower jaw

Anatomical equatoris the largest perimeter.

The functional purpose of the equator isremoval of the food lump from mesnow edge, i.e. injury prevention.

Reproduction of the equator on the crown is a qualitative indicator of the prosthesis.

The equator divides the prosthesis into occlusal andgingival (clear) surface.

I. Teeth of the upper jaw (v/v)

Central incisor

The largest of the entire group of incisors. The crown has a shovel-like shape, the side surfaces gradually converge to the neck.

The vestibular surface (V.p.) is convex, often rectangular. The newlyweds have wavy hair, the waves go longitudinally and dividev.p. into 3 parts. The crown at the cutting edge is wider than at the neck.

The medial corner is straight, the distal corner is rounded.

Oral surface (O.p.) is concave, has the shape of a triangle with the apex directed to the neck of the tooth. The upper third has a tubercle. In newlyweds, the hump is divided into several humps.

Approximal surface (AP) - has the shape of a triangle with the top facing the cutting edge. The neck line is bent. The neck is much narrower than the equator.

The height of the crown of the upper medial incisors on the vestibular surface is 9-12 mm, the width of the cutting edge is 8-9 mm. The medial-distal diameter of the neck is 6.3-6.9 mm, the vestibular -lingual - from 7.1 to 7.5 mm. The length of the root is 12-15 mm.

Lateral incisor

The size is smaller than the central ones. They have a shovel-like shape, the side surfaces are almost parallel.

V.p. - has a triangular shape with the top facing the neck.

The neck is located more distally than the cutting edge due to the fact thatproximal medial side slightly concave.

Crown height 8-10mm, width 6-7mm, medio-distal size of crown base 4.8-5.4mm,vestibulo-lingual – 5.8-6.2 mm, root length 11.5-14.5 mm.

Canines in

The canine forms the angle of the dental arch. The crown is massive.

The vestibular-oral size is larger at the base, the medial-distal size is in the middle. The crown tapers to the cutting edge and ends with a pointed hump. The crown protrudes slightly from the tooth rowmore vestibular.

V.p. it is convex and has a not sharply expressed longitudinal shaft, better visible at the cutting edge, which divides the tooth into 2 parts: medial - smaller and large - distal.

Cutting edge – the crown ends with a hump and has 2 blunt corners.

Medial - below the distal and closer to the hump.

O.p. - narrower than vestibular, also has a longitudinal shaft. There is a recess on both sides of it. In the upper third, the shaft turns into a well-developed tooth hump.

A.p. - more convex than the incisor.

The height of the crown of the upper canine is 10-12 mm, the width is 7-8 mm, the vestibulo-lingual size of the neck of the tooth is 7-8.5 mm, the medio-distal one is 5-6 mm, the root length is 16-18 mm.

The first premolar in the

Firstthe premolar is slightly larger than the second.

The crown resembles a prism, the sides of which are convex, has a larger diameter in the vestibular-oral direction, and a smaller one in the medial-distal direction.

V.p. - more oral andhas a well-defined masticatory hump. Similar to v.p. fangs, but shorter. It is divided into 2 halves by a slightly pronounced shaft.

A.p. - hasrectangular shape. The largest bulge is in the upper third.

Railway - if viewed from above, it has an oval shape. It has 2 main humps. They are separated by grooves lying longitudinally and transversely in the form of the letter H, the transverse line of the letter H runs along the middle of the

chewing surface in the medial-distal direction and reaches the middleproximal shafts.

Railway and the crown as a whole are somewhat narrowed in the oral direction, the vestibular tubercle is sharper and higher than the oral tubercle.

The height of the crown of the firstpremolar on the buccal surface 7.5-9mm, on the lingual 6-8mm, width of the crown in the widest part of the buccal surface 6.5-7mm, medio-distal size of the crown 4.8-5.5mm, buccal-lingual 8.5-9 .5 mm, root length 12.0-16.0 mm.

The second premolar in the

The shape is similar to the first onepremolar

The difference is that the humps of the chewing surface are equal in size.

V.p. less like a canine, more rounded.

The height of the crown of the firstpremolar on the buccal surface 7.5-8.5mm, on the lingual 6.5-7.5mm, width of the crown in the widest part of the buccal surface 6-7mm, medio-distal size of the crown 4.5-5.5mm, buccal-lingual 8 ,0-9.5mm, root length 12.5-16.5mm.

The first molar in the

V.p. – the medial hump is higher and larger than the distal onev.p. as it were, it consists of two premolars.

O.p. - sharply narrows to the neck. Medial-oralthe tubercle is much larger than the distal one, so the fissure separating them is located much more distally from the middle of the crown.

A.p. - medial more thanoblique, distal - rounded. The proximal line of the largest perimeter on the medial side is located higher, and the distal line is lower.

Railway - has the shape of a rhombus in the diagram. Vestibular-medial sizerailway more medial-distal. Med.-vestib. and the distal-oral humps have a sharp shape, the others have a rounded shape. Location of fissures on the railway corresponds to the oblique position of the letter H, the transverse line runs along the long diagonal of the rhombus. All fissures have a bevel to the middle of the rail. 1 molar - zh.p. - rhomboid shape.

4 humps: medial-vestibular – the largest, distal-oral – the smallest. Fissures have different depths, therefore shapesrailway vary

The height of the crown on the buccal surface is 6-8.5 mm, the medio-distal size of the crown base is 9-11 mm, the buccal-lingual is 11-13 mm, the root length is 13-16 mm.

The second molar in the

Less than the firstmolar The forms are very diverse: 1) – the form is like that of the first molar; 2) – the crown is elongated in the medial-distal direction; 3) extended in length, has three humps; 4) crown, as well as railway has a triangular shape. 2 molar - z.p. - square shape.

Three humps: two are vestibular, one is oral.

Crown height 6-8mm, width 9-12mm, medio-distal size of crown base 8-11mm, buccal-lingual 10.5-13mm, root length 12-15mm.

Third molar in \sh.

Least. Various shapes and sizes. Most often, there are only three humps, the shape of which resembles the first or secondmolar

3molar - zh.p. – a truncated triangle.

The height of the crown does not exceed 6 mm, the width does not vary much, the length of the root is 9-10 mm.

II. Mandible.

Central and lateral incisors

The smallest teeth. The central incisors are smaller than the lateral incisors.

Crowns are narrow, long, chisel-shaped.

A.p. - almost parallel.

V.p. - slightly convex or flat.

O.p. – smooth, concave, triangular in shape, tooth tubercles are weakly expressed. There is no sign of angles in the central incisors, it is weakly expressed in the lateral incisors, and the distal angle can be higher.

It is not always easy to distinguish whether central incisors belong to the right or left side.

A.p. - neck witha.p. pronounced moon-like shape.

The height of the crown of the central lower incisor is 7-9.5 mm, width 5.0-5.5 mm, vestibulo-lingual size of the neck 5.5-6 mm, medio-distal - 3.5-5 mm, root length 10.5-14 mm.

The height of the crown is 8-10.5 mm, the width is 5.0-6.0 mm, the medio-distal size of the neck is 4-4.5 mm,vestibule - lingual 6-6.5 mm, root length 12.5-15 mm.

Canine

Massive crown, tapering to the cutting edge from the vestibular and oral side.

V.p. – is divided by a longitudinal shaft into 2 facets, medial – smaller, distal – larger.

R. edge - is created by two segments converging at an angle, forming a cutting hump at the apex of the angle.

O. side – a pronounced tooth hump.

A.p. - somewhat converging to the neck.

The cutting edge protrudes above the edges of the incisors, the vestibular crown protrudes.

The height of the crown of the lower canines is 9-12mm, the width is 6-7mm, the medio-distal diameter of the crown base is 5-6mm, the vestibulo-lingual is 7-8mm, the root length is 12.5-16.5mm.

First premolar n\sh.

The crown is inclined oral in relation to the root.

V.p. - similar tov.p. fangs Divided by a longitudinal shaft into 2 facets. It has a hump with two slopes; medial and distal.

O.p. - even shorterv.p., which is caused by a less developed oral hump.

A.p. - have bulges that are located closer torailway The crown narrows to the neck.

Zh.p. is more rounded than inpremolars in 2 vestibular humps - larger, oral - smaller. The humps are connected by enamel shafts along the edge approximately and in the middle of the rail. The vestibular hump is inclined towards the oral hump. The oral hump of the blunt part does not contact the antagonist tooth.

The height of the crown of the first lowerpremolar on the buccal surface 7.5-11mm, on the lingual surface 5-6mm, crown width 6-8mm, buccal-lingual neck diameter 8.2-8.6mm, medio-distal 5.4-5.8mm, root length 13- 16 mm.

Second premolar n\sh.

Secondthe premolar is larger than the first premolar n\sh. The difference from the first premolar is that the top of the first premolar has a vestibular hump, the crown of the first premolar is narrowed to the oral side, and the crown of the second is rounded.

Crown of the secondpremolar is larger than the first premolar, it is inclined oral.

V.p. - resembles the first one in shapepremolar

O.p. - more, because the oral hump is more developed..

A.p. - slightly convex and converge to the neck of the tooth.

Railway - round shape. It has 2 or 3 vestibular and 2 oral humps.

The vestibular hump is obtuse, inclined oral.

Oral sharp and more pronounced than the firstpremolar

The height of the crown on the buccal surface is 7-9.5 mm, on the lingual surface 6.5-9 mm, width 7-8 mm, buccal-lingual diameter of the crown base 8-9.5 mm, medio-distal 4.5-6.4 mm, root length 14 -17mm.

First molar

Form onapproaches the shape of a cube.

V.p. - convex at the edgezh.p. inclined in the oral direction.

O.p. - also convex, less sov.p.

A.p. - medial more distal and more convex. The surface converges to the neck.

Railway - rectangular shape. The medial-distal size is larger than the vestibular-oral size.

5 humps: 2 oral, 3 vestibular. The largest hump is medial-vestibular, the smaller is distal-vestibular.

The humps are separated from each other by grooves from the medial to the distal edge and from the oral to the vestibular, crossing in the middlerailway at right angles.

The longitudinal groove does not reacha.p., transverse in the form of a groove goes to the v.p. and o.p.

The height of the crown of the first lowermolar 6-8mm, medio-distal crown size 10-13mm, buccal-lingual 9-12mm, root length 13-16mm.

Second molar n\sh.

It resembles the first one, but it is somewhat smaller.

Railway – has 4 humps: 2 vestibular, 2 oral, the medial hump is larger and higher than the oral hump, 2 oral humps are equal in size.

The vestibular humps are higher than the oral humps, blunt.

A.p. - almost parallel and slightly narrowing to the neck.

V.p. – divided into 2 halves by a deep furrow.

O.p. – divided by a furrow that reaches the oral bulge. The oral bulge is located above the vestibular.

Crown height 6-8.5mm, medio-distal size 9-12mm, buccal-lingual size 8-11mm, root length 13-15.5mm.

Third molar

It is also called a wisdom tooth. Changeable form andvelmychyne It is smaller than the previous lower molar, but larger than the upper wisdom tooth, especially in the medio-distal direction.

Railway – 4, 5, 3,6 tubercles.

Crown height does not exceed 5.5 mm, medio-distal size 6-11 mm, buccal-lingual 6-9 mm, root length 8-11 mm.

Reproduction of aesthetic contours of teeth requires considerable experience, knowledge and skills. During this process, all constituent aspects are important: tooth morphology, facial aesthetics, soft tissue contour, and occlusion parameters. During modeling, it is important not to focus on a specific shape or tooth, but to consider the whole concept of the tooth row based on the basic optimal algorithm. In the future, modeling elements can be individualized, significantly saving time in the process of restoring the necessary dental features.

4. Summary of results:

– Formation of teeth and dental rows.
– Anatomy of teeth and dental rows.
– The shape of the tooth rows.
– Replacement of tooth row defects.
– Bite and its types.
– Features of modeling different groups of teeth with different types of bite

5. List of recommended literature (main, additional, electronic information resources):

Main:

1. Aesthetic accents of dentistry: manual/M.Ya. Nidzelskyi, E.H. Shiyan, H.M. Davydenko. – Vinnytsia: New Book, 2016.-208 p.: illustrations

Additional:

1. Fundamentals of deontology in dentistry. Handbook for students and doctors / Ed. H.P. Ruzyna. –Vynnytsia: New Book, 2008. -120p.

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4. Shmidzer Y. Aesthetic dentistry Color atlas .-GalDent, 2005.-312 p., 952 illustrations.

Electronic information resources

1. State Expert Center of the Ministry of Health of Ukrainehttp://www.dec.gov.ua/index.php/ua/

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PRACTICAL LESSON No. 3

Topic: Smile design. Mimic and masticatory musculature as factors of aesthetic formation. Aesthetic problems of different age groups.

Goal: Modeling a smile. Interrelationship of facial and masticatory muscles in the aesthetic formation of a smile. Harmony and balance between soft and hard tissues of the oral cavity in people of different age categories and gender.

Basic concepts: Smile, facial and chewing muscles, harmony, balance.

Equipment: Computer, multimedia projector, phantoms.

Plan:

1. Organizational measures (greetings, verification of those present, announcement of the topic, purpose of the lesson, motivation of higher education seekers to study the topic).

2. Control of the reference level of knowledge:

- Anatomy of teeth, dental rows
- Anatomy of the maxillofacial area

3. Formation of professional abilities and skills (mastery of skills, curation, determination of treatment regimen, laboratory research, etc.):

The English novelist Charles Reid once remarked: "Beauty is power, and a smile is its weapon." The ability to smile is one of the most important non-

verbal communication skills that people possess and which is interpreted equally in all cultures of the world. Smiling has a positive effect on our personal and professional relationships, and some researchers even claim that smiling is good for our physical and mental health. The results of numerous surveys claim that about 90% of adults consider an attractive smile to be an important factor in social and career success.

However, not everyone is confident in their smile. For a variety of reasons, many people look in the mirror and do not find the attractive smile of their dreams.

Cosmetic dentistry can completely correct or significantly improve this situation with a comprehensive approach - smile modeling. Using traditional and the latest dental technologies, a specialist in cosmetic dentistry can create a new smile for the patient that will give a sense of self-confidence.

What is dental modeling and what is our approach to smile design based on?

Someone may ask: why change what was created by nature itself? A person's smile is as unique as fingerprints – it defines our identity. Who knows what a "normal" smile should look like? Who can tell for sure that she is not good enough? And who can decide what exactly needs to be changed?

Specialistsaesthetic dentistry smile design, must find correct and accurate answers to these questions and choose the most suitable method of tooth restoration.

Understanding what society finds attractive is easy. For this, it is worth simply observing how people react to their environment. It's hard not to notice that certain types of clothing, body shapes, hairstyles, and even smiles are considered more attractive than others. It is our nature to copy what is most popular in order to increase self-esteem and peace of mind.

In fact, this perception has more biological and physiological than socio-cultural basis. Yes, we appreciate a snow-white smile because discoloration is not characteristic of healthy teeth - it is a sign of caries. In addition, a full mouth of even teeth is a sign of a full-fledged, functional chewing system. Only a few centuries ago, a person without teeth faced real health risks, including the threat of starvation. Although this is already in the past - our ideas about beauty and attractiveness are instinctively connected with health and the need to survive.

After all, the ability to distinguish the "perfect" smile is based on the emotional impression that a person receives from looking in the mirror - it is purely individual and personal. The task of a specialist in cosmetic dentistry is to help each person reconcile his personal subjective ideas about beauty in accordance with objective diagnosis and practical possibilities of treatment.

Prediction of the future result of computer simulation of a smile.

Writer Lewis Carroll once wrote: "If you don't know where you're going, any road will lead you there." Another author - Lawrence J Peter - joked about

this: "If you don't know where you're going, you'll probably end up not there at all." These may be cynical statements, but they actually contain profound wisdom for those who are thinking about improving their appearance.

Creating a smile design is much more complicated than just carrying out a fashionable procedure. Patients often ask us: "Make me a beautiful smile." In order to satisfy such a seemingly simple request, you need to go through several preparatory stages. Effective planning begins with a conversation between the patient and the dentist. The patient needs to share their vision of the end result, and the dentist needs to explain and discuss the dental restoration processes using veneers, whitening, dental implants, crowns, and gum contour correction. To assess the patient's needs and problems, the dentist needs to know the answer to several key questions: How do you feel about your teeth? What do you like and dislike? If you could change anything about them, what would it be?

Thinking a few steps ahead, what would you like in the future? These questions are aimed at the essence of the discussion - at the patient's problems and priorities. If the patient answers openly and honestly, an empathetic doctor can infer the patient's concerns and visualize the desired outcome for the patient.

It can even be interesting to stretch your imagination and imagine the ideal result. A little dreaming is always helpful in any planning process, even in creating a new smile. With the end result firmly in mind, the patient and the dentist can take the next step in planning on the way to the goal.

"Now you are here" or what starts the process of modeling a smile and restoring teeth

Before starting treatment, the cosmetic dentist looks at the general appearance of the patient's face to determine the desired smile design. By purposefully selecting materials, sizes and proportions that match the patient's face, the dentist can create an attractive and balanced final result.

You have seen this inscription on the maps-schemes on the walls of large buildings: "You are here." After all, only after you find out exactly where you are at the moment, you can successfully make your way further and decide in which direction to turn. The same applies to cosmetic dentistry, which is both an art and a science. The dentist must fully evaluate all aspects of the patient's oral condition to determine the starting point. The key to getting rid of acne should be a comprehensive examination of the patient. It is clear that many patients, as a rule, focus exclusively on their aesthetic problems. However, the dentist conducts a smile analysis as part of a comprehensive assessment. Researchers and artists have carefully studied beautiful smiles and discovered several patterns that combine to create an attractive smile. Among them is the symmetry of the face - the elements of the smile should match each other, fitting into the picture of the whole face. The shape of the face is very important: for example, some people have a generally oval shape, while others have a more square or even conical outline. In addition to the shape and type of

the face, many other characteristics are important: asymmetry, color of the skin and face, color and location of the eyes, shape and size of the lips. Believe it or not, taking into account the overall appearance of the face will have a significant impact on the final appearance of the teeth and gums. A specialist in cosmetic dentistry takes into account all these factors and considers how the shape and position of the teeth will benefit or lose from the combination of all facial features.

The ratio of teeth and gums, which is reflected in a wide smile, is a key factor in assessing the aesthetic zone. Cosmetic dental professionals often use lip retractors to create photos to design a smile. When teeth are well-aligned, evenly colored, and proportionally shaped, the result is usually a more pleasant smile. When the gums open too much when smiling, the teeth can appear too small in comparison. Irregularity, asymmetry, caries on the gum line and chipped edges of the teeth - all this does not add beauty to our smile, making it far from ideal.

When we open our mouth during a smile, it's like a theatrical curtain that pulls back the stage behind it. In addition to the shape and position of the lips, other aspects of smile analysis include the principles of the aesthetic zone, in which the dentist looks for a combination of proportions of the teeth, gums and shadows, how they appear in a wide smile. The aesthetics of the gums is determined by the contour and color created by the gums around the teeth; dental aesthetics is determined by the relative proportions of shape and size, alignment, symmetry and arrangement of teeth in the upper and lower jaws and even how they relate to each other. Finally, various aspects of tooth characterization are used to assess color and contour qualities. Together, these principles serve to create a visual impression of your smile. With the help of a visual assessment and high-quality specialist dental photography, the dentist and the patient can assess which of these specific factors are causing the person to be dissatisfied with their smile.

However, when considering cosmetic problems, any professional doctor cares about the health of his patients. As noted above, cosmetic defects (missing, uneven, or discolored teeth) are often an indicator of a specific dental disease or hereditary problem that caused them. A complete assessment of the periodontium, that is, determining the health of the supporting structures of the teeth, bone and gum tissues, is very important, as they are the basis on which the teeth are held. Even if the patient is not aware of the presence of some of these problems, the first duty of the dentist is to make sure that they are healthy. The rest of the comprehensive examination includes assessment categories that reflect a complete analysis of oral health. Through the use of radiographs, photography, modeling, measurements, and direct clinical observation, the dentist analyzes the patient's jaw joint function, bite stability, and the health of the teeth and gums. After accumulating this complete set of data, the dentist will use all these findings in conjunction with the analysis of the smile to make a

"final diagnosis" - the dental equivalent of the phrase "Now you are here". With a firm understanding of this starting point and a clear focus on the desired destination, the patient and physician are now ready to consider options and chart a course of action.

Smile designin dentistry includes consideration of various aspects that affect the appearance of a smile. Let's look at some of them:

Mimic and masticatory muscles: The muscles of the face and oral cavity play an important role in the formation of a smile. Mimic muscles control the movements of the lips, eyes, and cheekbones, while the muscles of mastication affect the position and function of the teeth.

Aesthetic problems of different age groups: Different age groups may have different aesthetic problems. For example, children may have problems with the development of teeth, and adults with tissue aging and tooth loss.

Modeling a smile: Dentists use different methods to improve their patients' smiles. This can include restorations, alignment of the teeth, removal of stains and other procedures.

Harmony and balance of soft and hard tissues: It is important to ensure harmony between the teeth, gums and mucous membrane of the oral cavity. This helps to achieve a natural smile.

When performing aesthetic dental interventions, it is necessary to ensure harmony and balance between soft and hard tissues, that is, between the gums and the teeth themselves. This is the only way to achieve the best result from an aesthetic point of view. The article presents a clinical case that illustrates these provisions in practice. The issues of soft tissue aesthetics are well described in the literature. As for the characteristics of the teeth, during aesthetic interventions it is necessary to pay close attention to:

1. shape and size of teeth;
2. the nature of their appearance;
3. surface texture;
4. color.

4. Summary of results:

– Modeling a smile.

– Interrelationship of facial and masticatory muscles in the aesthetic formation of a smile.

– Harmony and balance between soft and hard tissues of the oral cavity in people of different age categories and gender.

5. List of recommended literature (main, additional, electronic information resources):

Main:

1. Aesthetic accents of dentistry: manual/M.Ya. Nidzelskyi, E.H. Shiyan, H.M. Davydenko. – Vinnytsia: New Book, 2016.-208 p.: illustrations

Additional:

1. Fundamentals of deontology in dentistry. Handbook for students and doctors / Ed. H.P. Ruzyna. –Vynnytsia: New Book, 2008. -120p.

2. Bernard Tuaty, Paul Miara, Dan Nathanson. Aesthetic dentistry and ceramic restorations. Trans. with English.. - M.: IzdatelskyDom "Higher Education and Science", 2004. - 448 p.

3. Crispin B.D., Hewlett E.R., Joe Y.H. Modern aesthetic dentistry. Practical basics. Trans. with English; Ed. T.F. Vinogradova. – Quintessence Publishing House, 2003 – 303 p.

4. Shmidzer Y. Aesthetic dentistry Color atlas .-GalDent, 2005.-312 p., 952 illustrations.

Electronic information resources

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2. National Scientific Medical Library of Ukrainehttp://library.gov.ua/

3. National Library of Ukraine named after V.I. Vernadskyihttp://www.nbuv.gov.ua/

PRACTICAL LESSON No. 4

Topic: Architectural beauty of the face. Maxillofacial area. Chewing apparatus and dental-jaw system. The human body and the golden ratio. Face proportions.

Goal: Acquaint applicants with the concepts of architectural facial beauty, facial anatomy. facial architecture. anatomy of the maxillofacial area. anatomy of the dental and jaw apparatus. relationship between the masticatory apparatus and the dental-jaw system. the history of the term "golden ratio". body and face proportions.

Basic concepts: facial beauty, maxillofacial area, aesthetics, golden ratio.

Equipment: Computer, multimedia projector, phantoms.

Plan:

1. Organizational measures (greetings, verification of those present, announcement of the topic, purpose of the lesson, motivation of higher education seekers to study the topic).
2. Control of the reference level of knowledge:
- Anatomy of the maxillofacial area
- Chewing apparatus
- Anatomy of the human body

3. Formation of professional abilities and skills (mastery of skills, curation, determination of treatment regimen, laboratory research, etc.):

A person's face has always been and will be a key part of appearance. It is the face that we pay attention to when choosing clothes, attracting attention and beautifying ourselves.

The shape of the face, its proportions, lines, features affect the impression of a person, his image as a whole. Therefore, it is very important to take into account the features of your face when creating an image and your style.

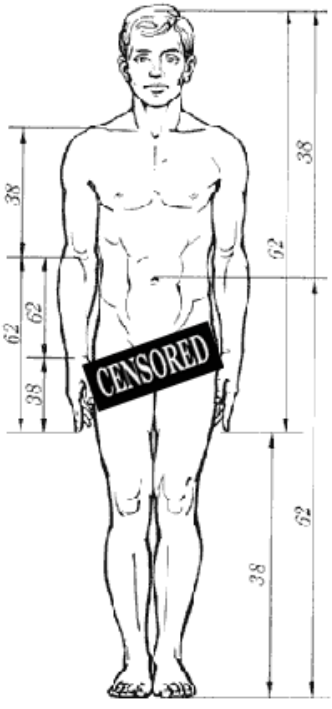
A face is not just an appearance. This is a reflection of genetic and national characteristics, character traits, level of culture and education, as well as many other aspects. And yet the first thing that others pay attention to is beauty. The golden ratio of a person allows you to determine the conformity of appearance with ideal parameters.

Many scientists skillfully searched for an answer to the question "what is beauty?" Thousands of years ago. And not without results! The Greek philosopher Pythagoras claimed that he not only discovered the secret of beauty, but also that he saw beauty in the universe. He discovered that plants and animals grow according to precise mathematical laws, and everything beautiful in nature obeys the law of the "golden ratio".

The golden section (golden ratio, division in the extreme and average ratio) is the division of a continuous quantity into two parts in such a ratio that the smaller part is related to the larger part as the larger part is related to the whole quantity.

A bit confusing, isn't it? But it is easy to understand by looking at an ordinary chicken egg, because it is one of many examples of this truly divine proportion.

Pythagoras calculated that the code of beauty is a ratio of 1: 1.618. And

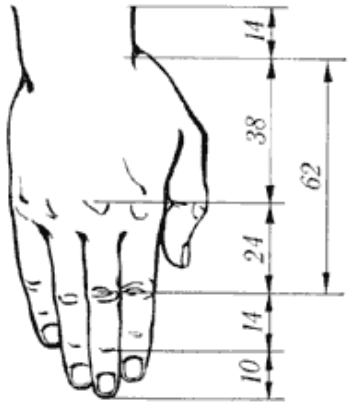


you won't believe it, but this ratio really works.

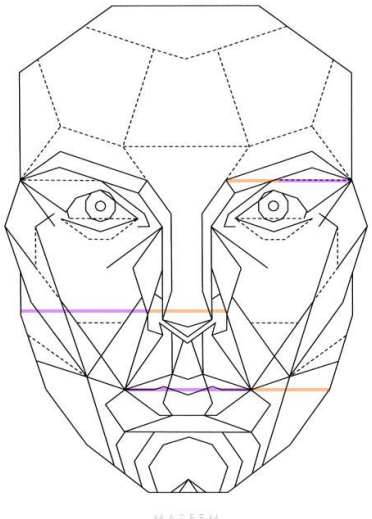
Try to measure the distance from the floor to the navel, and then from the navel to the head. If you have the correct body proportions, the ratio will be 1: 1.618. In an ideal face, the width of the mouth is exactly 1.618 of the width of the nose.

WITHtry to measure the distance from the chin to the part of the lips and from the part of the lips to the beginning of the nose, calculate their ratio.

Try to measure the distance from the chin to the eyebrow line and from the eyebrow line to the top of the head.



Steven Marquardt, based on the work of Pythagoras, Leonardo da Vinci and the German professor Zeising, combined all knowledge about the "golden ratio" and derived the formula for the ideal face, combined all triangles and pentagons, rectangles and trapezoids, squares and rhombuses, took into account all the ratios with the number 1.618 and created a mask - "beauty mask".

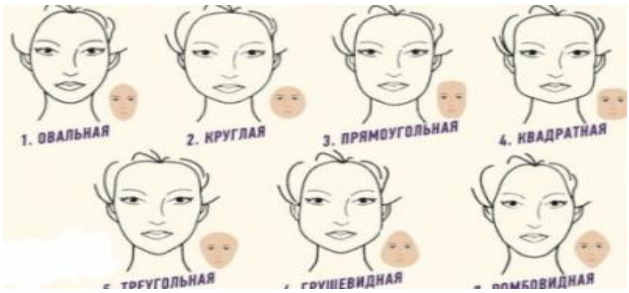


The oval face shape is considered the classic and ideal face shape. But in nature, there are a large number of face shapes that are far from ideal.

The main shapes of the face are distinguished according to the principle of geometric shape, namely

- Oval
- Round

- Rectangular
- Square
- Rhombus-shaped
- Triangular
- Trapezoidal
- Pear-shaped



Aesthetic problems of different age groups: Different age groups may have different aesthetic problems, such as tooth loss, changes in facial shape with age, and others. Dentistry and cosmetic procedures can help solve these problems.

4. Summary of results:

- Anatomy of the face.
- Architectural beauty of the face.
- Maxillofacial area.
- Chewing apparatus and dental-jaw system.
- The human body and the golden ratio.
- Proportions of the face.
- Aesthetic problems of different age groups.

5. List of recommended literature (main, additional, electronic information resources):

Main:

1. Aesthetic accents of dentistry: manual/M.Ya. Nidzelskyi, E.H. Shiyan, H.M. Davydenko. – Vinnytsia: New Book, 2016.-208 p.: illustrations

Additional:

1. Fundamentals of deontology in dentistry. Handbook for students and doctors / Ed. H.P. Ruzyna. –Vynnytsia: New Book, 2008. -120p.

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PRACTICAL LESSON No. 5

Topic: Concept of the terms "cosmetics" and "aesthetics". Elements of aesthetic culture. Aesthetic dentistry. The history of dental aesthetics.

Goal: Acquaint applicants with the concepts of: the terms "cosmetics" and "aesthetics". Elements of aesthetic culture. Aesthetic dentistry. The history of dental aesthetics.

Basic concepts:cosmetics, aesthetics, culture, dentistry.

Plan:

1. Organizational measures (greetings, verification of those present, announcement of the topic, purpose of the lesson, motivation of higher education seekers to study the topic).

2. Control of the reference level of knowledge:

- The history of dentistry
- The concept of "culture"

3. Formation of professional abilities and skills (mastery of skills, curation, determination of treatment regimen, laboratory research, etc.):

Culture is a set of material and spiritual values created by mankind throughout its history. It includes a historically acquired set of rules within society for its preservation and harmonization. Culture is a complex system of being that combines science, art, morality, way of life and worldview.

The word "culture" comes from the Latin word "cultura", which literally means "cultivation" or "to process". In classical antiquity, it was first recorded in the work of Marcus Porcius Cato the Elder "Deagricultura" (III century BC), dedicated to the concerns of the landowner who cultivated the land with the use of slave labor. Concerns corresponded to the spirit of the time: the author recommended keeping slaves beyond starvation, overloading them with work without measure, in order to prevent theft and frivolous activities.

Culture is studied by a complex of humanities, such as cultural studies, ethnography, cultural anthropology, sociology, psychology, and history. It determines our values, way of thinking, interaction and perception of the world around us. Culture is not only a legacy of the past, but also a living process that is constantly changing and developing.

Aesthetics is a philosophical science that studies the nature of aesthetic consciousness and is the science of the beautiful. It explores sensory knowledge of the world, contemplative or creative attitude of a person to reality. Aesthetics studies a peculiar experience of mastering the surrounding reality, during which the subject feels a state of spiritual and sensual euphoria, elation, joy, catharsis, spiritual pleasure and other emotions. Man feels his organic involvement in the Universe and his own essence inseparable from the First Cause, God.

Aesthetics covers not only questions related to the nature of beauty, but also general aspects of appreciation of art objects. It helps define what makes a work of art good, and how standards for such judgments are set.

Cosmetic dentistry is a branch of dentistry that specializes in restoring and improving the appearance of a patient's teeth and smile. It includes procedures such as teeth whitening, veneers, crowns and other methods that help improve the aesthetic appearance of teeth.

The history of dental aesthetics begins with the development of human consciousness. Art, as a result of the evolution of consciousness, allows us to perceive the world through our senses and create generalized images. Our senses help us navigate our environment, and art emerges from this experience.

Aesthetics is an interesting and deep science that helps us understand the beauty, expression and perception of the world around us.

4. Summary:

- Concept of the terms "cosmetics" and "aesthetics".
- Elements of aesthetic culture.
- Aesthetic dentistry.
- The history of dental aesthetics.

5. List of recommended literature (main, additional, electronic information resources):

Main:

1. Aesthetic accents of dentistry: manual/M.Ya. Nidzelskyi, E.H. Shiyan, H.M. Davydenko. – Vinnytsia: New Book, 2016.-208 p.: illustrations

Additional:

1. Fundamentals of deontology in dentistry. Handbook for students and doctors / Ed. H.P. Ruzyna. –Vynnytsia: New Book, 2008. -120p.

2. Bernard Tuaty, Paul Miara, Dan Nathanson. Aesthetic dentistry and ceramic restorations. Trans. with English.. - M.: IzdatelskyDom "Higher Education and Science", 2004. - 448 p.

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PRACTICAL LESSON No. 6

Topic: Fundamentals of aesthetic analysis. Analysis of the face, oral cavity. Smile, classification. Stages and types of smiles.

Goal: Aesthetic analysis of the maxillofacial area. Horizontal and vertical parameters of the face. Study and analysis of photography. Comprehensive analysis of the face and oral cavity. Classification of smile. Stages of smile formation. Types of smile.

Basic concepts:analysis, smile, face.

Equipment: Computer, multimedia projector, phantoms.

Plan:

1. Organizational measures (greetings, verification of those present, announcement of the topic, purpose of the lesson, motivation of higher education seekers to study the topic).

2. Control of the reference level of knowledge:

- anatomy of the maxillofacial area
- facial muscles

3. Formation of professional abilities and skills (mastery of skills, conducting curation, determining the treatment scheme, conducting laboratory research, etc.):

Basics of aesthetic analysisin dentistry include examinations of the face, oral cavity and smiles. Let's take a closer look at these aspects:

1. **Facial analysis**:
   - When assessing the face, attention is paid to symmetry, proportions and harmony.

- They determine the shape of the face, the location of the eyes, nose, lips and cheeks.
- They evaluate the condition of the skin, the presence of wrinkles, scars and other defects.

2. **Analysis of the oral cavity**:
   - They study the condition of the teeth, gums and mucous membrane.
   - The presence of carious defects, dental deposits, the condition of the gums and dental crowns are evaluated.

3. **Smile and its classification**:
   - A smile is an important aspect of facial aesthetics.
   - Classification of smiles includes different types of facial expressions such as natural smile, smile with teeth, smile without teeth, etc.
   - It is important to take into account the shape of the lips, the protrusion of the teeth and their color range.
4. **Stages of smiles**:
   - **Initial stage**: Determining the shape of the face and identifying possible defects.
   - **Stage planning**: Selection of correction and recovery methods.
   - **Executive stage**: Application of selected methods.
   - **Control stage**: Evaluation of results and correction if necessary.

4. Summary of results:

- Basics of aesthetic analysis.
- Analysis of the face, oral cavity.
- Smile, classification.
- Stages and types of smiles.

5. List of recommended literature (main, additional, electronic information resources):

Main:

1. Aesthetic accents of dentistry: manual/M.Ya. Nidzelskyi, E.H. Shiyan, H.M. Davydenko. – Vinnytsia: New Book, 2016.-208 p.: illustrations

Additional:

1. Fundamentals of deontology in dentistry. Handbook for students and doctors / Ed. H.P. Ruzyna. –Vynnytsia: New Book, 2008. -120p.

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PRACTICAL LESSON No. 7

Topic: Color and optical parameters of the tooth. Factors influencing the restoration of the color gamut.

Goal: Color parameters of the tooth. Optical and aesthetic parameters of the tooth. Peculiarities of tooth color determination. Optimal conditions for determining color. Possibilities of reproducing the color of natural teeth.

Basic concepts:color, optical parameters, illusion.

Equipment: Computer, multimedia projector, phantoms.

Plan:

1. Organizational measures (greetings, verification of those present, announcement of the topic, purpose of the lesson, motivation of higher education seekers to study the topic).

2. Control of the reference level of knowledge:

- Anatomy of teeth
- Color range.

3. Formation of professional abilities and skills (mastery of skills, curation, determination of treatment regimen, laboratory research, etc.):

The color and optical parameters of the tooth are important aspects in dentistry. Let's look at some key points:

Tooth color:

Teeth have different shades, from white to yellow or gray.

Factors that affect tooth color include genetics, age, diet, smoking, and coffee or tea consumption.

Color parameters of the tooth:

Hue (Hue): The shade of a tooth is determined by its color, for example, whether it is white, cream, yellow, or gray.

Saturation (Saturation): This is the color intensity. Saturated teeth are bright in color, while less saturated teeth may be paler.

Brightness (Value): Brightness is determined by the lightness of the tooth. It can be from dark to light.

Optical parameters of the tooth:

Oppositeness: Reflection of light from the tooth. Opaque teeth transmit less light and look whiter.

Translucency: The ability of a tooth to transmit light through itself. Translucent teeth can have a natural shade.

Peculiarities of tooth color determination:

Natural light: It is best to determine the color of the teeth in natural daylight.

Light from a lamp: If natural light is not enough, you can use special lamps with light similar to natural light.

Possibilities of reproducing the color of natural teeth:

Selection of the shade of the material: Dentists choose materials for tooth restoration that most closely match the natural color.

Color mixing: Special composite materials are used that can be mixed to achieve the exact color.

Optical parameters of the tooth:

Brightness: Determined by the light reflection of the tooth. Bright teeth look younger.

Saturation (chroma): Displays the intensity of the color. The teeth can be less or more saturated.

Tone (hue): Determines the shade of the tooth (yellow, gray, red, etc.).

Factors affecting the restoration of the color gamut:

Selection of material for tooth restoration (for example, plastic, ceramic).

Color matching when choosing a restorative material.

4. Summary of results:

- Tooth color
- Optical parameters of the tooth.
- Factors influencing the restoration of color gamut.

5. List of recommended literature (main, additional, electronic information resources):

Main:

1. Aesthetic accents of dentistry: manual/M.Ya. Nidzelskyi, E.H. Shiyan, H.M. Davydenko. – Vinnytsia: New Book, 2016.-208 p.: illustrations

Additional:

1. Fundamentals of deontology in dentistry. Handbook for students and doctors / Ed. H.P. Ruzyna. –Vynnytsia: New Book, 2008. -120p.

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PRACTICAL LESSON No. 8

Topic: Types and causes of optical illusions. Illusions of color. Creating an illusion in dentistry. Test.

Goal: Acquaint the applicants with the parameters: color and optical parameters of the tooth. Factors influencing the restoration of the color gamut. Types and causes of optical illusions. Illusions of color. Creating an illusion in dentistry.

Basic concepts:color, optical parameters, illusion.

Equipment: Computer, multimedia projector, phantoms.

Plan:

1. Organizational measures (greetings, verification of those present, announcement of the topic, purpose of the lesson, motivation of higher education seekers to study the topic).

2. Control of the reference level of knowledge:

- Anatomy of teeth
- Color range.

3. Formation of professional abilities and skills (mastery of skills, curation, determination of treatment regimen, laboratory research, etc.):

Illusions of coloris a fascinating topic that arises when our eyes and brain perceive colors even where they are not actually there. Here are some interesting facts and types of color illusions:

Optical illusion "Color square":

This illusion shows how context can affect the perception of color.

Look at the squares in the center of the image. They are really the same color, but the surrounding colors make them appear different.

Illusion "Color constant":

This illusion demonstrates that colors can remain constant despite changes in lighting.

Look at the two areas of the image. They have the same color tone, although they appear different due to context.

Illusion "Color gradient":

This illusion shows how our brain perceives color transitions.

Look at the vertical gradient. Although the colors change smoothly, we perceive them as different.

Illusion "Color circle":

This illusion demonstrates how colors can interact.

Look at the color wheel. It has different sectors, but when we focus on one, the other colors seem to change.

Optical illusions in dentistry:

Illusions can occur due to reflections, shadows and interactions with other teeth.

It is important to consider these factors when restoring teeth.

Creating an illusion in dentistry:

Using appropriate materials and techniques to achieve the desired appearance of teeth.

Consideration of optical parameters to create a natural impression.

4. Summary of results:

- Types and causes of optical illusions.
- Illusions of color.
- Creating an illusion in dentistry.
- Balance.

5. List of recommended literature (main, additional, electronic information resources):

Main:

1. Aesthetic accents of dentistry: manual/M.Ya. Nidzelskyi, E.H. Shiyan, H.M. Davydenko. – Vinnytsia: New Book, 2016.-208 p.: illustrations

Additional:

1. Fundamentals of deontology in dentistry. Handbook for students and doctors / Ed. H.P. Ruzyna. –Vynnytsia: New Book, 2008. -120p.

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